

Annotated Bibliography: 2025 Update

Development of the Canadian National Plan for Health Workforce Well-being

September 18, 2025

FINAL

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**Royal College of Physicians and
Surgeons of Canada**

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1. Introduction

DPRA Canada Inc. was hired by the Royal College of Physicians and Surgeons of Canada to conduct an environmental scan of the best available evidence to support the development of the National Plan for Health Workforce Wellbeing (NPHWW). The environmental scan includes an annotated bibliography and a thematic review of the literature to summarize and synthesize the best available evidence from peer-reviewed and grey literature to support the development of the National Plan for Health Workforce Wellbeing (NPHWW). The following report presents an annotated bibliography of the literature included in the environmental scan.

2. Methodology

This annotated bibliography presents the results of an environmental scan of the grey and peer-reviewed literature related to the six identified priority areas for the NPHWW. The priority areas are defined as follows.

- **Create and sustain positive work and learning environments and culture.** Transform health organizations, health education and health care training by prioritizing and investing in efforts to optimize environments that prevent and reduce burnout, foster professional well-being, and support quality care.
- **Support mental health and reduce stigma.** Provide support to health workers by eliminating barriers and reducing the stigma associated with seeking services needed to address mental health challenges.
- **Engage effective resources to minimize administrative burden.** Invest in staffing and human resources to alleviate the administrative burden placed on physicians, nurses (including nurse practitioners), and other members of health care teams, increasing the amount of time available for patient care. Optimize and expand the use of health information technologies that support health workers in providing high-quality patient care and serving population health, and minimize daily requirements, such as documentation, that inhibit clinical decision-making or add to administrative burden.
- **Institutionalize and invest in well-being as a long-term value.** Address systemic issues that inhibit worker well-being to create sustainable public health and health systems that are resilient and responsive now and into the future.
- **Recruit and retain a diverse and inclusive health workforce.** Promote careers in the health professions and enable healthy work environments that promote inclusiveness, diversity, equity, accessibility, and a thriving workforce.
- **Invest in measurement, assessment, and research.** Determine the most effective measurement and assessment tools for health workforce well-being, burnout, and related metrics. Identify key areas of focus for future research to address gaps in knowledge about well-being and burnout.

The included evidence encompasses academic and grey literature related to health workforce well-being from 2015 to July 2025, with attention to systemic, organizational, and Canadian perspectives when available. Selected articles published prior to this period were included if deemed relevant. Sources were

identified through searches of Canadian health organization websites, academic databases, and contributions from individuals participating in the development of the NPHWW.

A total of 150 sources of evidence were identified and included in the annotated bibliography. The sources added to the annotated bibliography for the 2025 update are listed in [Appendix A](#).

The number of included sources by health workforce profession are summarized in [Table 1](#).

Table 1. Number of annotations by health workforce profession

Health Workforce Profession	Number of Annotations
Physicians ⁴	76
All Health Professions ¹	38
Nurses ³	23
Dentists	5
Midwives	6
Nurse practitioners	4
Pharmacists	5
Dental Assistants	4
Dental Hygienists	3
Occupational Therapists	4
Physiotherapists	4
Social Workers	5
Allied Health Professionals ²	3
Medical Radiation Technologists	3
Respiratory Therapists	3
Support Workers	2
Chiropractors	1
Medical Laboratory Technicians	1
Paramedics	1
Physician Assistants	1
Psychologists	1
Speech Language Therapists / Audiologists	1
Psychotherapists	1
Notes: 1. Broadly applicable evidence relevant to all health professions. 2. Research articles where allied health professions were undefined or included professions other than those listed. 3. Licensed practical nurses, registered nurses, and nurse practitioners when grouped together in articles about nursing professionals. 4. Medical doctors and residents of various specialties and medical students	

The evidence included in this annotated bibliography was critically appraised to determine whether the findings are reliable, meaningful, and applicable to the development of the NPHWW. The number of types of evidence, number of citations, and relevant critical appraisal tools identified **Table 2** and full references are listed in **Appendix B**.

Table 2. Type of evidence, number of citations and relevant critical appraisal tools

Type of Evidence	Number of Annotations	Appraisal Tool
Expert opinion	28	McArthur et al., 2020
Analytical cross-sectional [quantitative]	34	Munn et al., 2020a
Policy	22	McArthur et al., 2020
Qualitative	16	CASP, 2018b
Systematic review	15	CASP, 2018c
Descriptive cross-sectional	13	Munn et al., 2020b
Analytical cross-sectional [mixed methods]	5	Hong et al., 2018
Narrative	12	McArthur et al., 2020
Cohort	3	CASP, 2018a

The results of each appraisal are noted within the annotations. Evidence rated as good indicates that it meets quality standards identified in the respective appraisal tool. Articles rated moderate or poor include a statement on the source's limitations. Two references to sources for key definitions, one database source, and one evaluation study for which a suitable appraisal tool was unavailable were not included in the evidence appraisal.

3. Annotations

Akoo, C., McMillan, K., Price, S., Kenchera, I., Ayoub, A., Sands, R., Shankland, M, Bourgeault, I. (2024). “I feel broken”: Chronicling burnout, mental health and the limits of individual resilience in nursing. *Nursing Inquiry*, 32(2), 1-11.

Summary: The authors present qualitative findings from interviews with 53 Canadian frontline nurses, exploring their experiences of mental health challenges, burnout, and leave of absence (LOA) during the COVID-19 pandemic. The study identifies a central theme of “breaking points” occurring at individual, organizational, and societal levels, where nurses felt overwhelmed by caregiving responsibilities, systemic under-resourcing, workplace disrespect, and public misinformation. These stressors were compounded by gendered expectations and emotional labor, especially in a predominantly female profession. The authors argue that burnout is not merely an individual issue but a symptom of deeper structural and systemic dysfunctions in healthcare. They call for trauma-informed, intersectional, and multi-level interventions that prioritize organizational and systemic reform over individual resilience narratives to restore the health and sustainability of the nursing profession.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurses

Relevance: This review suggests that the NPHWW will need to further explore systematic issues and cultures that contribute to nurse burnout, specifically, providing intervention early into the cycle of burnout.

Priority Areas: Positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value; Support mental health and reduce stigma

Arslan, F., Marcus, J., Khatami, A., Guergachi, A., & Keshavjee, K. (2024). Towards a regulatory framework for workflow improvement in electronic medical records. In *The Role of Digital Health Policy and Leadership* (pp. 54–58). IOS Press.

Summary: This study measured the time doctors take to retrieve and review information in the patient chart at the beginning of a visit, one of approximately 12 tasks associated with taking electronic medical records (EMRs) during a visit. Methods included observation of daily patient visits, categorized by diagnostic group and semi-structured interviews with key stakeholders. Information retrieval took approximately 40 minutes per day, which could have been reduced by 75% if automated. The authors estimated that automation could free up time equivalent to more than 3,000 physicians and more than 5 million patients, enough to absorb the vast majority of patients currently without a doctor. The authors recommended an accelerated research program to identify additional opportunities for workflow automation and a regulatory program to ensure every physician has access to workflow automation in their EMR.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Moderate; the methodology used for this study is unclear. It does not explain the procedures used for sampling, the number of participants, and how the semi-structured interviews were conducted.

Health Workforce Profession: Physicians

Relevance: Consider integrating a research program to identify effective workflow automation, which would reduce administrative burden and, thereby, physician burnout.

Priority Areas: Engage effective resources to minimize administrative burden

Asch, S. M., Atkins, D. V., & Walling, A. (2021). If kindness were a drug, the FDA would approve it. *Journal of General Internal Medicine*, 36(2), 263–264. <https://doi.org/10.1007/s11606-020-06343-7>

Summary: This piece reflected on some of the research supporting kindness to improve patients' healthcare experiences and mitigate physician burnout. Kindness interventions have been shown to improve patient experiences and outcomes. Kindness is a muscle that can be developed through meditation and other techniques. The author concluded that kindness interventions merit further investigation, particularly what techniques work best in the modern healthcare delivery system.

Type of Evidence: Expert opinion, Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should explore kindness interventions and techniques to improve patient care and support physician well-being.

Priority Areas: Create and sustain positive work and learning environments and culture

Atanackovic, J., Freeman, A., Demers, C., Neiterman, E., Benoit, C., Theissen, K. & Bourgeault, I. (2021). Leave of absence and return to work among Canadian midwives who experience mental health issues: Pilot study findings. *Canadian Journal of Midwifery Research and Practice*, 20(2). <https://doi.org/10.22374/cjmrp.v20i2.43>

Summary: This study highlights the significant impact of challenging working conditions on midwives' mental health, often leading to leaves of absence or even workforce attrition. It reveals that certain demographic factors increase vulnerability to mental health-related work disruptions. By examining midwives' experiences through surveys and interviews, the research underscores the urgent need for targeted support programs and policies to promote wellbeing and facilitate a smoother return to work, ultimately strengthening the health workforce.

Type of Evidence: Analytical cross-sectional [mixed methods]; Peer-reviewed; Canada

Quality: Poor; Quantitative analysis is limited by a small sample size (16 participants) and relies solely on frequency counts. The scoping review lacks clarity, with no stated inclusion or exclusion criteria. Additionally, the interview coding process is poorly described, making it difficult to draw meaningful conclusions.

Health Workforce Profession: Midwives

Relevance: This review suggests that the NPHWW prioritize advocacy for targeted mental health support and return-to-work policies to promote wellbeing and retention within the midwife workforce.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Awuku, M. (2025). Beyond Residency: 'The imperative of the lifelong learning in medical practice'. *Medical Teacher*, 47(4), 748-750. <https://doi.org/10.1080/0142159X.2024.2337243>

Summary: The Continuing Professional Development (CPD) landscape is rapidly evolving, presenting challenges for healthcare professionals—many of whom face significant stress that can lead to burnout. While medical and residency training are highly structured, CPD often occurs in less formal settings. This shift can contribute to professional stagnation and may result in physician reluctance or inertia toward engaging in CPD. Common barriers include time constraints, a sense of self-sufficiency, reliance on occasional journal reading, and skepticism about its value. These issues warrant ongoing exploration. The authors emphasize the need to effectively communicate that CPD is essential and should not be overlooked. Highlighting its benefits—such as reduced stress, increased confidence, and enhanced professional reputation—may help encourage greater physician participation.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This review suggests that the NPHWW will need to effectively communicate the benefits of continuing professional development for their members and explore the possibility of offering supports to reduce stress and increase confidence.

Priority Areas: Support mental health and reduce stigma; Engage effective resources to minimize administrative burden

Bautista, T. G., Roman, G., Khan, M., Lee, M., Sahbaz, S., Duthely, L. M., Knippenberg, A., Macias-Burgos, M. A., Davidson, A., Scaramutti, C., Gabrilove, J., Pusek, S., Mehta, D., & Bredella, M. A. (n.d.). What is well-being? A scoping review of the conceptual and operational definitions of occupational well-being. *Journal of Clinical and Translational Science*, 7(1), e227. <https://doi.org/10.1017/cts.2023.648>

Summary: This scoping review sought to identify conceptual and operational definitions of well-being within the field of occupational health. The scoping review included peer-reviewed articles published in English using a measure of well-being in the method and results section. Three-hundred and eighty-eight articles out of 4,394 reviewed met the inclusion criteria and were included in the analysis. Many studies did not define well-being or link their conceptual definition with the operational assessment tool employed. This review indicated a lack of consistent 'well-being' definitions in the literature, which had implications for standardizing measurements of well-being.

Type of Evidence: Systematic review [scoping]; Peer-reviewed

Quality: Good

Health Workforce Profession: Occupational Therapists

Relevance: This review suggests that the NPHWW will need to clearly define and differentiate the term 'well-being' from other constructs in its programming and factor in the variety of definitions employed by studies to inform program development.

Priority Areas: Invest in measurement, assessment, and research

Billick, M., Rassos, J., & Ginsburg, S. (2022). Dressing the part: Gender differences in residents' experiences of feedback in internal medicine. *Academic Medicine*, 97(3), 406. <https://doi.org/10.1097/ACM.0000000000004487>

Summary: This study sought to understand whether the experience of being assessed and receiving feedback differed between male and female internal medicine (IM) residents and how women responded to such experiences. It used a constructivist grounded theory approach to data collection and interpretation. All IM residents in postgraduate years 1–3 at the University of Toronto were invited to participate in semi-structured focus groups (August–October 2019). Twenty-two residents participated (8 men and 14 women). Focus groups were divided by gender and training level. The authors found significant divergence in male and female resident experiences of feedback. Power and authority, tactics to re-establish power and authority, conflicting feedback, and ways of moving forward emerged in focus group discussions. Female residents consistently mentioned that feedback was provided to them outside formal settings and felt they needed to 'dress and act the part' more than their male counterparts. The study concluded that the subversive nature of gender roles and expectations had the potential to heavily influence career development, confidence, mobility, and leadership opportunities but were not necessarily captured in standard measures.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This study indicates that the NPHWW will need to account for distinct male and female experiences of receiving feedback and their impacts on career development, confidence, mobility, and leadership.

Priority Areas: Recruit and retain a diverse and inclusive health workforce

Blue, C. L., Gould, O. N., Clarke, C., Naylor, H., MacKenzie, M., Burgess, S., MacAulay, S., Flewelling, A. J. (2022). Burnout among hospital pharmacists in Canada: a cross-sectional analysis. *Canadian Journal of Hospital Pharmacy*, 75(4), 326-334. <https://doi.org/10.4212/cjhp.3224>

Summary: The prevalence of burnout among hospital pharmacists in Canada is unknown; however, it has been documented at over 60% in other countries. Using a cross-sectional cohort study to assess the prevalence of burnout and variables associated with burnout among hospital pharmacists in Canada, the authors surveyed over 2600 hospital pharmacists using the Maslach Burnout Inventory Human Services Survey for Medical Personnel (MBI-HSSMP). A total of 171 respondents provided suitable data and the authors concluded that only 13 (7.6%) met the criteria for burnout on all 3 subscales of the burnout inventory; however, 105 respondents (61.4%) surpassed the threshold for burnout on the emotional exhaustion subscale. Linear regression highlighted associations between scores on the emotional exhaustion subscale and gender identity, perceived excessive on-call duties, area of practice, and positivity of workplace culture. Content analysis of the open-ended question supported the quantitative findings and pointed to 3 major themes: workload quantity workload quality, and workplace culture. Results on the emotional exhaustion subscale of the MBI-HSSMP and responses to the open-ended question suggested a relatively high prevalence of burnout among Canadian hospital pharmacists, and indicated potential links between burnout and certain workplace characteristics.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Pharmacists

Relevance: This review suggests that the NPHWW could undertake further research within Canada to explore pharmacist burnout and that more research must be done to understand the link between pharmacist burnout and workplace characteristics.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Boulton, T., Upadhyaya, D., Pichette, E., & Rankin, J. C. (2024, February 23). "Burnout is Real": A SWOT analysis of Albertan midwives' perspectives on providing midwifery care. *Canadian Journal of Midwifery Research and Practice*.

Summary: This paper presents the results of a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of interviews with 16 midwives in Alberta. Barriers to work life balance (e.g., demanding on-call schedule, limited time off, challenges related to being self-employed, making personal sacrifices) were identified as a main contributor to stress and burnout. The findings highlight an urgent need to address the challenges associated with the working conditions and high levels of burnout described by Alberta midwives.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Midwives

Relevance: The article suggests that prioritizing funding and demonstrating greater support and recognition for midwives is necessary to improve the sustainability of practice.

Priority Areas: Support mental health and reduce stigma

Bourgeault, I. L., Atanackovic, J., McMillan, K., Akumoah-Boateng, H. & Simkin, S. (2022). The pathway from mental health, leaves of absence, and return to work of health professionals: Gender and leadership matter. *Healthcare Management Forum*, 35(4), 199-206. <https://doi.org/10.1177/08404704221092953>

Summary: This study underscores the critical role of leadership and workplace culture in supporting health workforce wellbeing, revealing that mental health-related leave and return-to-work experiences vary across professions and are influenced by gender and leadership dynamics. To reduce absenteeism and improve retention, the findings call for destigmatizing mental health, fostering supportive environments, and investing in leadership training and mentorship within healthcare settings.

Type of Evidence: Analytical cross-sectional [mixed methods]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurses; Physicians; Midwives; Dentists

Relevance: This review suggests that the NPHWW champion initiatives that destigmatize mental health in healthcare settings and promote leadership development and mentorship programs to strengthen support systems and improve wellbeing across the health workforce.

Priority Areas: Create and Sustain Positive Work and Learning Environments and Culture; Support mental health and reduce stigma

Brazeau, C. M. L. R., Shanafelt, T., Durning, S. J., Massie, F. S., Eacker, A., Moutier, C., Satele, D. V., Sloan, J. A., & Dyrbye, L. N. (2014). Distress among matriculating medical students relative to the general population. *Academic Medicine*, 89(11), 1520. <https://doi.org/10.1097/ACM.0000000000000482>

Summary: This study compared mental health indicators for matriculated medical students against a probability-based sample of the general US population to gain insight into the impact of medical school on mental health. 582/938 matriculating medical students participated (62% response), and 546 age-similar college graduates participated as the control population. In 2012, all matriculating medical students at six US medical schools were invited to complete a survey during orientation on demographics, burnout, depression, and measures of quality of life. In 2011, the same survey was administered to the control population. In all analyses, including those adjusted for demographic characteristics, matriculating medical students had lower rates of burnout and depression scores and higher quality of life scores at the time of orientation. This suggested that when matriculating medical students first entered medical school, they had relatively good mental health. Since other studies observed mental health decline through and after medical school, this study suggested that the school environment was the culprit and changes in the learning environment were needed.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This study suggested that the medical school environment contributed to mental health decline, indicating that the NPHWW should focus on early intervention strategies and modifying the learning environment to promote well-being.

Priority Areas: Support mental health and reduce stigma

Bulk, L. Y., Tikhonova, J., Gagnon, J. M., Battalova, A., Mayer, Y., Krupa, T., Lee, M., Nimmon, L., & Jarus, T. (2020). Disabled healthcare professionals' diverse, embodied, and socially embedded experiences. *Advances in Health Sciences Education*, 25(1), 111–129. <https://doi.org/10.1007/s10459-019-09912-6>

Summary: This paper provided a taxonomy for conceptualizing the (complex) experiences of disabled healthcare practitioners. The study used the Social Relational Understanding framework for understanding disability and interviewed 56 disabled students and clinicians in five healthcare practices: medicine, nursing, occupational therapy, physiotherapy, and social work. No two participants experienced the same combination of characteristics and dimensions of disability, even if they fit the same biomedical category (e.g., depression). This suggested that knowing someone's disability characteristics is helpful but insufficient for supporting inclusion. The authors concluded that 'cookie cutter' approaches to accommodation need to be re-examined and revised to support practitioners with disabilities based on their unique characteristics and needs.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Physician; Nurse; Occupational Therapist; Social Worker; Physiotherapist

Relevance: This paper suggests that the NPHWW should be highly adaptive to individual needs and circumstances when it comes to supporting disabled healthcare practitioners. The majority of

participants in this study were nurses and allied health professionals and included only three physicians and one medical student.

Priority Areas: Recruit and retain a diverse and inclusive health workforce

Burns, K. E. A., Pattani, R., Lorens, E., Straus, S. E., & Hawker, G. A. (2021). The impact of organizational culture on professional fulfillment and burnout in an academic department of medicine. *PLoS ONE*, 16(6), e0252778. <https://doi.org/10.1371/journal.pone.0252778>

Summary: This study assessed the impact of organizational culture on physician's professional fulfillment and burnout. Cross-sectional survey assessed demographics and perceptions of workplace culture. Four-hundred and nineteen eligible faculty members (52% response) participated. Controlling for demographics (including gender, age, career stage, clinical workload), the results showed that professional fulfillment was associated with positive work environments; relatedly, lower professional fulfillment was associated with higher burnout scores. The authors concluded that physicians' perceptions of the organizational culture at work were strongly related to their self-reported professional fulfillment and burnout.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should factor in workplace culture when addressing and preventing physician burnout. Specifically, the program should encourage positive work environments where physicians feel they can act against unprofessional behaviour without fear of retaliation.

Priority Areas: Recruit and retain a diverse and inclusive health workforce

Bynum, W. (2018, August 2). Narrowing the Vulnerability Gap. *Duke Department of Family Medicine and Community Health*. <https://fmch.duke.edu/blog/will-bynum-md-narrowing-vulnerability-gap>

Summary: This blog post advocated for physicians to take strides to close the 'vulnerability gap' with their patients when appropriate in order to strengthen their connection with the patient and also self-love. The author observed that although physicians are empathic and listen intently to patients, they rarely engage in the same level of vulnerability as their patients – hence the 'vulnerability gap' - yet doing so increases patient and physician satisfaction/fulfillment. They deduced that physicians should take strides to close the vulnerability gap to improve their practice. They expressed that this is only possible if physicians first address their internal vulnerability gap through deliberate self-kindness and consistent willingness to reach out to others for help. The author concluded that willingness to be vulnerable with oneself and, by extension, with one's patients improved their practice.

Type of Evidence: Expert opinion; Grey literature

Quality: Poor; Perspective based exclusively on personal experience and is not supported by literature. This evidence should be used with caution.

Health Workforce Profession: Physicians

Relevance: This opinion piece suggests that the NPHWW would benefit from providing opportunities for physicians to nurture self-kindness and educating physicians on the benefits of closing the vulnerability gap with themselves and their patients.

Priority Areas: Support mental health and reduce stigma

Canadian Academy of Health Sciences. (2023). *Canada's health workforce: Pathways forward*. https://cahs-acss.ca/wp-content/uploads/2023/04/CAHS-Health-Workforce-Pathways-Forward-EN_Final_Apr-4.pdf

Summary: This report provided policymakers with an overview of the evidence as they consider strategies to ensure there is adequate capacity within Canada's health workforce to provide needed health services and rapidly respond to emerging public health concerns. An evidence-based assessment involved reviewing more than 5,000 academic articles and 250 policy reports and consulting more than 80 individuals from 245 organizations across Canada within a year. The assessment was guided by a diverse group of more than 30 interdisciplinary clinical and academic health workforce experts. The report covered evidence regarding support and retention, deployment and service delivery, and planning and development with consideration of Indigenous Peoples, rural and remote communities, and systemically disadvantaged populations. The report recommended five priority pathways, including: supporting the development of successful and fulfilled Indigenous healthcare learners and practitioners; supporting community engagement as a foundation for rural and remote recruitment and retention strategies; creating safe, healthy, just, and equitable workplaces with diverse and representative workforces; transforming care through optimized scopes of practice within team-based models, supported by appropriate technology and properly aligned incentives; embedding a culture of health workforce planning support by enhancing data and decision-making tools.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests the NPHWW should align interventions and strategies with the identified priority pathways where possible.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma; Engage effective resources to minimize administrative burden; Institutionalize and invest in well-being as a long-term value; Recruit and retain a diverse and inclusive health workforce

Canadian Association of Medical Radiation Technologists. (2022). *A case for investment in health workforce*. <https://www.ourcommons.ca/Content/Committee/441/HESA/Brief/BR11654747/br-external/CanadianAssociationOfMedicalRadiationTechnologists-e.pdf>

Summary: This report argues that medical radiation technologists, along with other technology-intensive medical professions, deserve significant investment in their well-being due to the essential yet often underappreciated nature of their contributions. Supporting data reveals high burnout rates among MRT professionals, underscoring the urgency of this call to action.

Type of Evidence: Analytical cross-sectional [quantitative]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Medical Radiation Technologists

Relevance: This suggests that NPHWW should develop specific mitigations and strategies for addressing MRT worker burnout.

Priority Areas: Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Canadian Association of Medical Radiation Technologists. (2024). *Written submission for the pre-budget consultations in advance of the 2025 budget*. <https://www.camrt.ca/wp-content/uploads/2024/09/CAMRT-Pre-budget-submission-2025-FINAL-1.pdf>

Summary: This report provides recommendations to the federal government to support medical radiation technologists. Key recommendations include fostering collaboration between provinces to address backlogs and human resource challenges, as well as investing in programs to enhance the mental well-being of the health workforce.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Medical Radiation Technologists

Relevance: This suggests that NPHWW should support greater collaboration between provinces to support wellbeing for MRTs.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Canadian Chiropractic Association. (2022). *HUMA: Study on labor shortages, working conditions and the care economy*. <https://chiropractic.ca/wp-content/uploads/2022/11/CCA-HUMA-Labour-Shortages-and-the-Care-Economy.pdf>

Summary: This report advocates for a patient-centered, interprofessional approach to enhance healthcare outcomes and improve system efficiency, particularly in managing musculoskeletal (MSK) conditions. It emphasizes that leveraging chiropractors' hands-on expertise supports community-based care models, strengthens interdisciplinary teamwork, and directly contributes to the well-being of health professionals by alleviating systemic pressures and promoting a more balanced and effective distribution of care responsibilities.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Chiropractors

Relevance: This suggests that NPHWW should strive to improve system efficiency by supporting interdisciplinary teamwork to support wellbeing for workers and patients.

Priority Areas: Engage effective resources to minimize administrative burden

Canadian Dental Association. (2023). *Canadian Dental Association federal election policy platform*. https://www.cda-adc.ca/files/about/membership/advocacy/CDA_Fed_Election_EN_2025.pdf

Summary: This report provides a comprehensive overview of the dental workforce in Canada, emphasizing the critical shortage of dentists and dental hygienists. Key findings reveal that one in four dental hygienists plans to leave the profession within the next five years. To address these challenges, the report recommends developing a pan-Canadian oral health workforce strategy focused on retention and recruitment.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Dentists; Dental Hygienists

Relevance: This supports the purpose of NPHWW in developing a national strategy for health workforce wellbeing and suggests that special focus on the wellbeing of the dental health workforce is required to support retention.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Canadian Institute for Health Information. (2023, June 8). *Commonwealth Fund survey, 2022.*

<https://www.cihi.ca/en/commonwealth-fund-survey-2022>

Summary: This survey addressed the challenges experienced by family doctors. International health policy survey of primary care physicians in 10 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States. The survey analyzed workload and perceived quality of care, satisfaction with administrative work, and use of personnel. Canadian family doctors worked more hours while seeing fewer patients per week compared with the CMWF average. About three-quarters of Canadian physicians felt that the quality of care patients receive throughout the healthcare system had worsened since March 2020, when the COVID-19 pandemic began, compared with almost two-thirds of all physicians surveyed. More than half were not satisfied with the amount of time they spent on administrative work. Fewer Canadian family physicians (52%) are working with personnel within their practice to monitor, manage and coordinate care for patients with chronic conditions who need regular follow-up care, compared with the CMWF average (65%). Family physicians working in group practices and community clinics/health centres were more likely to work with other health professionals. The authors concluded that most of the administrative work physicians reported may not require physicians' clinical expertise; building on current electronic medical record uptake with the implementation of patient-centric, integrated, standardized health data systems and digital tools can ensure that information is shared within and between different care settings; better access to health data and medical records with integrated health data systems can improve care coordination among primary care doctors and other health care providers; health teams can improve quality and coordination of care through the use of a multidisciplinary approach. Related reports knowledge translation reports are available at: <https://cahs-acss.ca/assessment-on-health-human-resources-hhr/>

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: The results of this survey suggest that the NPHWW should address the administrative burden on family care physicians, improve electronic medical record systems, including by integrating systems, and encourage a multidisciplinary approach to care.

Priority Areas: Engage effective resources to minimize administrative burden; Invest in measurement, assessment, and research

Canadian Institute for Health Information. (2024a). *The state of the health workforce in Canada, 2022.*

<https://www.cihi.ca/en/the-state-of-the-health-workforce-in-canada-2022>

Summary: This article compiled the most recent data on selected health professionals, including physicians, regulated nurses, pharmacists, occupational therapists, physiotherapists and personal support workers, to illustrate the current state of the health workforce. Surges in healthcare job

vacancies (doubling since the start of the pandemic to 120,140 in 2022–2023) suggested that demand for healthcare outpaced the gains in supply. In 2021–2022, an unprecedented amount of hospital overtime was logged by staff (over 26 million hours, equivalent to more than 13,000 full-time positions). The highest rates of overtime were observed in intensive care and in mental health and substance use inpatient units. Almost all provinces and territories expanded the scope of practice for pharmacists. Most jurisdictions modified policies to expedite registration for healthcare workers, including provisions and programs to streamline internationally educated nurse entry to the health workforce. The author concluded that the COVID-19 pandemic was a time of challenge and innovation, particularly in the area of health human resources. Funding increases, pan-Canadian collaboration and changes in health service delivery across the country set the stage for new conversations about how to move forward.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physician; Nurses; Pharmacists; Occupational Therapists; Physiotherapists; Support Workers

Relevance: This data provides a reference point for the NPHWW regarding the state of the health workforce in Canada. It also suggests that interventions and strategies to reduce hospital overtime are needed.

Priority Areas: Invest in measurement, assessment, and research

Canadian Institute for Health Information. (2024b). *Tracking workplace measures*. <https://www.cihi.ca/en/the-state-of-the-health-workforce-in-canada-2022/tracking-workplace-measures>

Summary: This article presented health worker vacancy rates, workplace overtime hours and the experiences of health workers to guide targeted retention strategies that promote worker wellness and improve the quality of both employment and patient care. In 2022–2023, there were an average of 120,140 healthcare job vacancies across the four quarters of the fiscal year. This reflected a doubling of vacancies from 2019–2020 (prior to the onset of the COVID-19 pandemic) and a quadrupling since 2015–2016. Job vacancies were highest for personal support workers (30,800 vacant positions; 25.7% of all health care vacancies), followed by registered nurses and registered psychiatric nurses (28,000; 23.3%) and selected mental health workers (21,360; 17.8%). Collectively, these professionals accounted for two-thirds of all healthcare job vacancies in 2022–2023. Overtime hours as a percentage of total worked hours increased during the pandemic, particularly in mental health units. Healthcare workers sick time and the number of workplace mental health and violence reports also increased. The authors concluded that the COVID-19 pandemic exacerbated the cycle of staffing challenges and healthcare worker burnout and that staffing challenges combined with the negative mental health impacts on staff stemming from increased amounts of overtime could lead to a cycle of burnout and understaffing.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This data suggests that the NPHWW is appropriately focused and should focus on measures to address overtime hours to mitigate burnout and further understaffing.

Priority Areas: Invest in measurement, assessment, and research

Canadian Medical Association. (2018). *CMA 2018 national physician health survey.*

<https://digitallibrary.cma.ca/link/digitallibrary18>

Summary: This report presented the findings of the 2018 national survey of physicians, which was designed to gain a deeper understanding of how physicians are affected by a multitude of factors impacting their health and wellness. The survey was designed by a CMA Expert Working Group and completed in 2017 by nearly 3,000 users. The survey covered questions covered demographics, area of practice, experience, location, population served, and primary residency. Nearly 60% of total respondents said their overall mental health was flourishing; 87% said their emotional well-being was high; 81% said their psychological well-being was high and 65% said their social well-being was high; 82% of participating residents and physicians said their resilience was high. However, the survey also revealed that burnout, depression and lifetime suicidal ideation rates were higher among residents than physicians and higher among women than men. The report concluded that

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests the NPHWW should develop strategies to promote physician health with special attention paid to residents and women physicians.

Priority Areas: Support mental health and reduce stigma

Canadian Medical Association. (2020). *Empathy in medicine.* <https://www.cma.ca/physician-wellness-hub/content/empathy-medicine>

Summary: This blog post introduced a definition, rationale, steps for and examples of fostering empathetic communication in medicine to support improved healthcare practices. Empathetic communication is defined as listening actively and positively without judging or trying to influence what the other person is thinking. It was argued that empathy benefits patients, physicians, and institutions. Readers were instructed to perceive and identify emotions, investigate and understand the other person's feelings, help them work on evolving their emotions, and watch nonverbal cues to cultivate empathy. The authors argued empathy should be actively promoted, supported and cultivated in the medical profession.

Type of Evidence: Expert opinion; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests the NPHWW should consider ways to encourage empathetic communication in healthcare to improve workplace culture and patient experience.

Priority Areas: Create and sustain positive work and learning environments and culture

Canadian Medical Association. (2022). *CMA 2021 national physician health survey.*

https://digitallibrary.cma.ca/media/Digital_Library_PDF/2021%20NPHS%20report%20EN.pdf

Summary: This report presented the findings of the 2021 national survey of physicians, medical residents, and students concerning their health and wellness to enable comparison with 2017 results to advance the development of physician wellness initiatives. A national survey, developed with guidance from an expert working group, was administered to 4,121 physicians, medical

residents, and medical students in 2021 in French and English. The survey covered questions covered demographics, area of practice, experience, community size, psychological factors, accessing wellness supports, and the impact of the COVID-19 pandemic. Physicians' well-being decreased significantly compared to the 2017 survey, with a near doubling in burnout scores. Specifically, burnout and suicidal ideation were reported more frequently, which is likely related to the impacts of the pandemic. Numerous subgroups, such as but not limited to medical residents, women, caregivers, and those living with disabilities, also reported worse wellness outcomes in the most recent survey. However, the latest survey also revealed greater prioritization of wellness amongst participants than in 2017. Prevention and treatment support were recommended to enhance physician wellness, career satisfaction, and retention to, ultimately, improve the delivery of safe patient care. Future analyses comparing these results against the general population, diving deeper into subgroup differences, and performing regression analyses were also recommended to strengthen and reveal new insights.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: These results suggest that physician wellness has declined post-pandemic, especially in certain subgroups, but that physicians are more receptive to wellness support. This implies the NPHWW is well-timed in prioritizing physician wellness support but also that it should be sensitive and responsive to the unique needs of physician subgroups.

Priority Areas: Engage effective resources to minimize administrative burden

Canadian Medical Association. (2024). *Digital Health Interoperability Task Force Report*. <https://www.infoway-inforoute.ca/en/component/edocman/6498-digital-health-interoperability-task-force-report/view-document?Itemid=103>

Summary: The Digital Health Interoperability Task Force Report underscores the critical need to address the lack of interoperability in Canada's healthcare system, which negatively impacts patient care, clinician efficiency, and system-wide innovation. The report highlights the importance of enabling seamless data exchange between healthcare providers and patients, reducing administrative burdens on clinicians, and modernizing outdated privacy legislation. Key recommendations include fast-tracking a national interoperability plan, establishing a National Health Data Governance Council, accelerating supportive legislation like Bill C-72, addressing barriers for clinicians, and investing in technological innovations such as AI. The report emphasizes the vital role of collaboration among governments, clinicians, patients, and vendors to create a connected care system that enhances patient safety and outcomes while supporting clinicians in their workflows.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: All Health Professions

Relevance: This report suggests that the NPHWW should address the lack of interoperability in Canada's healthcare system to reduce burden on healthcare professionals.

Priority Areas: Engage effective resources to minimize administrative burden.

Canadian Medical Association. (2025). *Federal election CMA's policy recommendations.*

[https://digitallibrary.cma.ca/viewer?file=%2Fmedia%2FDigital Library PDF%2F2025%2520CMA%2520Federal%2520Election%2520Policy%2520Platform%2520202503%2520EN.pdf#page=1](https://digitallibrary.cma.ca/viewer?file=%2Fmedia%2FDigital%20Library%20PDF%2F2025%2520CMA%2520Federal%2520Election%2520Policy%2520Platform%2520202503%2520EN.pdf#page=1)

Summary: This letter outlines the CMA's federal policy recommendations for 2025 as it relates to improving healthcare. The letter includes several recommendations specifically focused on health workforce wellbeing. For example, it advises the federal government to aim to reduce administrative burden. In total, there are 15 recommendations connected to 5 overarching goals.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Physicians

Relevance: This report supports the aims of the NPHWW in prioritizing health workforce wellbeing to improve healthcare delivery.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma; Engage effective resources to minimize administrative burden; Institutionalize and invest in well-being as a long-term value; Recruit and retain a diverse and inclusive health workforce

Canadian Nurses Association. (2024). *Submission for the pre-budget consultations in advance of the federal*

***budget.* [https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/policy-advocacy/Pre-Budget Consultations Federal Budget Submission-August 2024-EN.pdf](https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/policy-advocacy/Pre-Budget%20Consultations%20Federal%20Budget%20Submission-August%202024-EN.pdf)**

Summary: This report outlines the CNA's 2025 budget recommendations to the federal government aimed at enhancing healthcare delivery and well-being among nurses and other healthcare practitioners. Key recommendations include allocating resources for nurses' mental health, providing funding for continued Indigenous Research Chairs in Nursing, and allowing nurses to certify the disability tax credit form to alleviate administrative burden.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Nurses

Relevance: This report suggests the NPHWW has identified relevant priority areas for improving health workforce wellbeing.

Priority Areas: Support mental health and reduce stigma; Engage effective resources to minimize administrative burden; Recruit and retain a diverse and inclusive health workforce

Canadian Physiotherapy Association. (2025). *Written submission for the Department of Finance 2025-26 pre-budget consultation.* https://physiotherapy.ca/app/uploads/2025/03/CPA-2025-Pre-Budget-Submission_March-2025.pdf

Summary: This report outlines the CPA's 2025 pre-budget submission, emphasizing the urgent need to integrate physiotherapy professionals into Canada's healthcare system. It highlights how physiotherapists can alleviate system pressures, reduce burnout among primary care providers, and improve patient outcomes through expanded scopes of practice, student loan relief, and

inclusion in health planning. The submission advocates for reforms that empower physiotherapists to work to their full potential – such as prescribing foot orthoses and ordering diagnostic imaging – and calls for streamlined credentialing and bridging programs for internationally educated physiotherapists. These measures aim to enhance access, equity, and sustainability in healthcare delivery while supporting the wellbeing of the physiotherapy workforce.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Physiotherapists

Relevance: This report suggests the NPHWW consider integrating targeted support for internationally educated physiotherapy practitioners, and consider workforce planning strategies to enhance system resilience and reduce burnout.

Priority Areas: Engage effective resources to minimize administrative burden; Recruit and retain a diverse and inclusive health workforce

Casey, S. (2023). *Addressing Canada's health workforce crisis: Report of the standing committee on health. House of Commons Canada, 44th Parliament, 1st session.* House of Commons Canada. <https://www.ourcommons.ca/Content/Committee/441/HESA/Reports/RP12260300/hesarp10/hesarp10-e.pdf>

Summary: Over the course of seven meetings, the House of Commons Standing Committee on Health (the Committee) conducted a study on Canada's health workforce to determine how the crisis can be addressed, with a focus on the retention and recruitment of health care providers. The Committee received testimony from national and regional health professional organizations, educational institutions, not-for-profit organizations, individual healthcare professionals, and other health workforce stakeholders. Witnesses outlined the extent of the workforce crisis in Canada's healthcare system. The testimony highlighted how longstanding issues with a lack of supply of health professionals and mental health issues among health professionals currently in the workforce were exacerbated by the COVID-19 pandemic. Witnesses stated that resolving this crisis will involve both short- and long-term solutions and that the federal government should play a role in rebuilding this essential sector. Recommendations included: increasing the number of residency positions, particularly for family medicine and international medical graduates; improving upon and expanding pathways to licensure for international physicians; establishing pan-Canadian licensure for health professionals; developing a Pan-Canadian Health Data Strategy to improve Canada's collection, access, sharing and use of health data; and implementing a Pan-Canadian Mental Health Strategy for health care workers. included recruiting and training internationally trained health care workers, pan-Canadian licensure, improving data collection and implementing innovative models of healthcare delivery as well as various supports and financial incentives for healthcare workers.

Type of Evidence: Policy [government report]; Grey literature; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This report suggests that the NPHWW is appropriately focused on worker well-being and mental health. It also suggests that the Plan should consider interventions and strategies that improve data collection and innovate healthcare delivery systems to support healthcare workers.

Priority Areas: Invest in measurement, assessment, and research; Engage effective resources to minimize administrative burden

Cates, E. C., Ramlogan-Salanga, C., MacKenzie, R. K., Wilson-Mitchell, K., & Darling, E. K. (2024). A cross-sectional survey of the mental health of midwives in Ontario, Canada: Burnout, depression, anxiety, stress, and associated factors. *Women and Birth*, 37(4), 101613.

Summary: Nationally, 33% of Canadian midwives are seriously consider leaving the profession. Burnout is considered to be a contributing factor, but little is known about how and why burnout presents in midwives. 275 Ontario midwives complete a cross-sectional survey that included the Copenhagen Burnout Inventory and the Depression, Anxiety and Stress Scale. Over 50% of participants reported symptoms of depression, anxiety, stress, and burnout. Having less than 10-years practice experience, identifying as a midwife with a disability, the inability to work off-call, and having taken a prior mental health leave were all identified as predictors of poor mental health outcomes.

Type of Evidence: Analytical cross-sectional [quantitative], Peer reviewed; Canada

Quality: Moderate; Strong outcome measurement and reporting with adequate sample size, but analytical limitations (no multivariable adjustment) and potential selection bias temper confidence in the observed associations.

Health Workforce Profession: Midwives

Relevance: There is an urgent need to invest in retention strategies that address the root causes of attrition for midwives. The high levels of stress, anxiety, depression, and burnout among Ontario midwives raise serious concerns for the profession, its leaders, and regulators.

Priority Areas: Create and sustain positive work and learning environments and culture.

Priority Areas: Create and sustain positive work and learning environments and culture.

Cook, D. A., & Beckman, T. J. (2006). Current concepts in validity and reliability for psychometric instruments: Theory and application. *The American Journal of Medicine*, 119(2), 166.e7-166.e16. <https://doi.org/10.1016/j.amjmed.2005.10.036>

Summary: This article presented a framework for assessing validity to support physicians in determining the quality and, relatedly, reliability of results produced by 'psychometric instruments' (e.g., symptom scales, questionnaires, education tests). This article developed a conceptual framework for assessing validity based on a literature review. The authors presented a framework for assessing validity that entailed careful consideration of several factors including the response process, internal structure, relation to other variables, and evidence integration. It also argued that reliability is a necessary but insufficient condition for valid inferences and stressed that validity is a property of inferences, not instruments. The article concluded that increased attention to the systematic collection and appraisal of validity in evidence using the proposed framework would improve research, education, and patient care assessments.

Type of Evidence: Systematic review [narrative]; Peer-reviewed

Quality: Poor; This literature review is not framed by a clear research question and does not provide sufficient details on their search strategy, inclusion criteria or quality assessment procedures.

Health Workforce Profession: Physicians

Relevance: This article suggests that researchers should use the proposed framework to assess the validity of findings sensitively and accurately when conducting research for the NPHWW.

Priority Areas: Invest in measurement, assessment, and research

D'Alessandro-Low, A. M., Ricciardelli, R., Ritchie, K., Xue, Y., Stelnicki, A., McCabe, R. E., McKinnon, M. C. & Carleton, R. N. (2024). Canadian nurses' interprofessional work stressors: A qualitative study. *Nursing & Health Sciences*, 27, e70091. <https://doi.org/10.1111/nhs.70091>

Summary: Interprofessional stressors, such as strained relationships with physicians, management, and co-workers, can significantly impact nurses' mental health and contribute to workplace distress. Some interprofessional stressors can even rise to the level of morally injurious or traumatic experiences. This study highlights that these stressors not only compromise patient care and team cohesion but also pose a serious threat to the wellbeing of the nursing workforce. Addressing workplace environments to foster healthier, more supportive work can sustain the wellbeing of the health workforce.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurses

Relevance: This suggests that NPHWW should address interprofessional stressors through strategies that foster respectful collaboration, psychological safety, and team-based support systems to improve nurse retention and mental health.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma

Darling, E. E., Grenier, L., N., MacKenzie, R. K., Ramlogan-Salanga, C., Cates, E. C., Graybrook, R. & Wilson-Mitchell, K. (2023). A mix-method study exploring barriers and facilitators to midwives' mental health in Ontario. *BMC Women's Health*, 23(155). <https://doi.org/10.1186/s12905-023-02309-z>

Summary: This study sheds light on the mental health challenges faced by midwives in Ontario, revealing how the unique model of care, compensation structure, professional culture, and external pressures contribute to workplace stress and burnout. Through a mixed-methods approach involving interviews, focus groups, and surveys, researchers identified key factors affecting wellbeing and proposed systemic solutions, including diversified work options, trauma-informed support, tailored mental health services, and fostering respectful professional relationships, to enhance the overall health workforce wellbeing and sustainability of midwifery care in Ontario.

Type of Evidence: Analytical cross-sectional [mixed methods]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Midwives

Relevance: This suggests that NPHWW should prioritize systemic reforms that enhance flexibility, trauma-informed support, peer relationships, and public respect to improve midwives' mental health and overall workforce wellbeing in Ontario.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Data Access Support Hub. (2024). *Health Data Research Network Canada* [Webpage]. from <https://www.canadiandataplatfrom.ca/en/dash/>

Summary: This Data Access Support Hub (DASH) provides a data access service portal for researchers requiring multi-regional health and health-related administrative data in Canada. There were three main data inventories available through DASH: Data Assets Inventory, Algorithms Inventory, and COVID-19 Inventory. The Data Assets Inventory provided information about the data assets researchers can request. The Algorithms Inventory contained algorithms that have been validated or tested for feasibility of implementation in two or more Canadian provinces and territories or nationally. The COVID-19 Inventory contained information about the availability of COVID-19-related data resources to support researchers. DASH also provided regional data and guidance on how to use data. It was recommended that DASH be used to increase the quality of studies on health-related issues like hospital wait times, chronic illnesses, mental health, and disease prevention, as well as to strengthen the quality of research findings.

Type of Evidence: Administrative Data [inventory]; Grey literature; Canada

Quality: Not appraised

Health Workforce Profession: All Health Professions

Relevance: The Data Access Support Hub is available to support the identification and access to data that can support the development and evaluation of the NPHWW

Priority Areas: Invest in measurement, assessment, and research

de Wit, K., Tran, A., Clayton, N., Seeburruth, D., Lim, K., Archambault, P., Chan, T., Rang, L., Gray, S., Rithie, K., Gerin-Lajoie, C., Mercuri, M. (2024). A longitudinal survey on Canadian emergency physician burnout. *Annals of Emergency Medicine*, 83(6), <https://doi.org/10.1016/j.annemergmed.2024.01.009>

Summary: Canadian emergency departments have experience record levels of patient attendance, wait times, bed blocking and crowding. This longitudinal study on Canadian emergency physician wellness explored burnout rates of Canadian emergency physicians in both 2020, and again in 2022. The survey consisted of the Maslach Burnout Inventory and an optional free-text explanation of the participants experience. The response rate to the 2022 survey was 381 (62%) representing all provinces and territories except the Yukon. 59% of respondents reported high emotional exhaustion, and 64% reported high depersonalization. Burnout levels in 2022 were significantly higher compared to 2020. Participants noted that the broken health care system, lack of political or social support and systemic workplace challenges were mediators of burnout.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; The authors claim they will use paired t-tests to compare well-being scores at T1 and T2, but present only mean scores without significance testing, making conclusions about increased burnout questionable and potentially due to sampling error—these findings should be interpreted with caution.

Health Workforce Profession: Physicians

Relevance: This suggests that NPHWW could advocate for a more robust emergency care system and for organizations to redress the negative impact experienced by emergency physicians when institutional support is lacking.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

DeChant, P. F., Acs, A., Rhee, K. B., Boulanger, T. S., Snowdon, J. L., Tutty, M. A., Sinsky, C. A., & Thomas Craig, K. J. (2019). Effect of organization-directed workplace interventions on physician burnout: A systematic review. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 3(4), 384–408. <https://doi.org/10.1016/j.mayocpiqo.2019.07.006>

Summary: This review assessed the impact of organization-directed workplace interventions on physician burnout from peer-reviewed and grey literature from 2007-2018 in English. Fifty studies were included in the review and stratified into teamwork (expanding responsibilities, improving communication, etc.), time (scheduling adjustments, etc.), transitions (workflow changes), and technology (implementation or improvement of electronic health records) focused interventions. The authors concluded that although the literature results were hard to compare, streamlining workflows, providing leadership-driven professional support opportunities, and reducing the administrative burden of electronic health records by enlisting medical assistants and scribes were associated with the greatest improvement in burnout rates.

Type of Evidence: Systematic review [narrative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: The results suggest that the NPHWW may benefit from integrating similar interventions to reduce physician burnout; however, given the difficulty of comparing studies, the results should not be construed as definitive.

Priority Areas: Engage effective resources to minimize administrative burden; Invest in measurement, assessment, and research

DeSimone, S., Vargas, M., & Servillo, G. (2021). Organizational strategies to reduce physician burnout: A systematic review and meta-analysis. *Aging Clinical and Experimental Research*, 33(4), 883–894. <https://doi.org/10.1007/s40520-019-01368-3>

Summary: This article aimed to evaluate the most effective intervention strategy, individual or organizational, to reduce physician burnout. The metanalysis was executed according to PRISMA guidelines, and physicians, residents, and fellows, regardless of specialty, were included. Organization-directed interventions were associated with moderate reductions in burnout; in contrast, physician-directed interventions were associated with small reductions in burnout. The authors concluded that organization-directed interventions were associated with higher treatment effects of physician burnout and suggested burnout was linked to the organizational coherence of the healthcare system rather than individual-level factors.

Type of Evidence: Systematic review [meta-analysis]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: The article suggests that the NPHWW should focus on organizational-level burnout interventions to maximize effects.

Priority Areas: Institutionalize and invest in well-being as a long-term value; Invest in measurement, assessment, and research

Dextras-Gauthier, J., Gilbert, M.-H., Dima, J., & Adou, L. B. (2023). Organizational culture and leadership behaviours: Is manager's psychological health the missing piece? *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1237775>

Summary: This paper sought to explore the complex process by which organizational culture influences managers' psychological health to support the adoption of good leadership. 522 managers in three healthcare facilities in Quebec underwent path analyses with the CALIS procedure SAS software. Group culture was associated with managers' psychological health at work. Distress was related to transactional and laissez-faire leadership styles. Well-being was associated with transformational and transactional leadership styles. Hierarchical culture and transactional leadership were indirectly associated. This paper provided a more in-depth understanding of the relationship between organizational culture and leadership styles and highlighted the benefits of implementing a group organizational culture to enhance psychological well-being, reduce stress, and promote good leadership behaviours.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; The participant inclusion criteria were not stated, and confounding factors were not identified.

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW may benefit from incorporating strategies that promote transformational and transactional leadership styles.

Priority Areas: Create and sustain positive work and learning environments and culture

DiLalla, L. F., Hull, S. K., & Dorsey, J. K. (2004). Effect of gender, age, and relevant course work on attitudes toward empathy, patient spirituality, and physician wellness. *Teaching and Learning in Medicine*. 16(2), 165–170. https://doi.org/10.1207/s15328015tlm1602_8

Summary: This paper assessed self-ratings of empathy, spirituality, wellness, and tolerance in a sample of medical students and practitioners to explore the differences by gender, age, and training. A cross-sectional survey addressing empathy, spirituality, wellness, and tolerance in the medical setting was created. Medical students and practitioners completed the surveys anonymously. The survey was longitudinal and intended to capture changes in attitude over time in school. The paper found the youngest groups scored highest on empathy and wellness and lowest on tolerance. Participation in medical school wellness sessions correlated with higher empathy and wellness scores. Participation in both empathy and spirituality sessions correlated with higher empathy scores. The authors concluded that exposure to educational activities in empathy, philosophical values and meaning, and wellness during medical school may increase empathy and wellness in medical practice.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Moderate; The number of participants in small-group sessions was unclear and yet central to the studies' conclusion. All participants were from the Midwest, and a high degree of sample variability was noted, suggesting it may not be representative of the general population.

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW may benefit from incorporating educational activities in empathy, philosophical values and meaning, and wellness early on—such as during medical school—to help prevent physician burnout.

Priority Areas: Support mental health and reduce stigma

Djukic, B. (2021). *Mental health status of medical laboratory professionals*. Canadian Society for Medical Laboratory Science. <https://csmls.org/wp-content/uploads/2023/09/CSMLS-MH2021-Final-Report.pdf>

Summary: This report examines the changes in mental health status observed within the Canadian Society for Medical Laboratory Science (CSMLS) since 2018. It highlights key findings related to stress levels, burnout, mental health issues, and psychological distress within the profession. The report also explores overall job satisfaction and workplace relationships that influence well-being. With over 1,300 participants responding to the survey, the report identifies potential future actions to support well-being.

Type of Evidence: Analytical cross-sectional [quantitative]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Medical Laboratory Technicians

Relevance: This report provides valuable baseline data on CSMLS workforce wellbeing that can inform the NPHWW update.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Do, V., Lewis, M., Goldstein, C., & Sonnenberg, L. K. (2023). *Fostering a health-promoting learning environment in medical education: Adapting the Okanagan Charter for administrators and medical educators*. *Academic Medicine*, 98(6), 672. <https://doi.org/10.1097/ACM.0000000000005159>

Summary: This paper provided a framework for reassessing work on well-being in medical education by adapting the Okanagan Charter to a medical school context. This was in response to research suggesting when students enter medical school their well-being declines. The Okanagan Charter was developed in collaboration with researchers, practitioners, administrators, learners, and policymakers from 45 countries and the WHO. The authors adapted the Charter by adding a sixth strategic direction and contextualizing all strategies to the medical school context. The six strategic directions included embedding health in all policies, developing sustainable and supportive spaces, creating thriving medical communities and culture, encouraging, supporting, and sustaining meaningful personal development, reviewing, developing, and strengthening faculty-level health services, and collaborating and investing in continuous improvement and evaluation. The authors concluded that developing the six strategic directions in the medical school curriculum would improve the experiences of learners, staff, and faculty.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should consider and develop the six strategic directions in its program to strengthen practitioner well-being.

Priority Areas: Create and sustain positive work and learning environments and cultures; Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Doctors Manitoba. (2024a). *Joint task force to reduce administrative burdens for physicians progress report #1*. <https://assets.doctorsmanitoba.ca/documents/Admin-Burden-Progress-Report-May-30.pdf>

Summary: This report examined the extensive administrative burden physicians in Manitoba face to identify opportunities to reduce it. Manitoba physicians spent an average of 10.1 hours per week on administrative tasks, or 1.44 million hours per year. Time spent on administrative tasks was highest for family & rural physicians, younger physicians, and BIPOC and women physicians. Two-thirds of physicians reported that the time they spent on administrative tasks had increased over the previous five years. Physicians attributed most of the unnecessary administrative tasks to “burden owners” – organizations outside the health care system such as insurance companies. The authors concluded they would aim to reduce unnecessary administrative burdens by 10% by December 2023.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Moderate; Information on the study’s sampling frame and procedures are not provided.

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW may benefit from addressing unnecessary administrative burdens placed on physicians.

Priority Areas: Engage effective resources to minimize administrative burden

Doctors Manitoba. (2024b). *Joint task force to reduce administrative burdens for physician: Progress report #2*. <https://assets.doctorsmanitoba.ca/documents/ABTF-Progress-Report-Feb-2024.pdf>

Summary: This follow-up report on the administrative burden on Manitoba physicians aimed to outline progress achieved since June 2023. The Task Force identified approximately 75,300 hours of unnecessary administrative time, which surpassed the target of 63,300 hours or 10%. The Task Force recommended adopting a burden reduction lens to any administrative task involving a physician and consulting physicians when a change will affect their administrative tasks.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests the NPHWW should consider adopting a reduction lens to administrative work and consulting physicians on administrative task changes as part of its intervention and strategy suite.

Priority Areas: Engage effective resources to minimize administrative burden

Drummond, D., & Jones, D. (2023). *Improving access to primary healthcare. Intelligence Memos*. CD Howe Institute. https://www.cdhowe.org/sites/default/files/2023-06/IM-Drummond%20and%20Jones_2023_0629.pdf

Summary: This memo examined how to boost primary care coverage for Canadian adults from 78 to 85%. The authors determined that boosting the covered population to 85 percent, with population growth, would require increasing the average number of people rostered by each physician by almost 10 percent. It was concluded that nurse practitioners were crucial to meeting the coverage goal and should be used as effectively as family physicians (e.g., Ontario has had nurse-led clinics since 2007) and given a fuller scope of practice. It was also recommended that the administrative burden on primary care providers be reduced to free up time for direct health services.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurse Practitioners; Physicians

Relevance: This memo suggests that the NPHWW should consider interventions and strategies that reduce administrative burden and focus on utilizing nurse practitioners as effectively as possible.

Priority Areas: Institutionalize and invest in well-being as a long-term value; Engage effective resources to minimize administrative burden

Du, B. B., Yung, M., Gruber, J., & Yazdani, A. (2022). Organizational strategies to address post-traumatic stress injuries among Canadian paramedics. *Work*, 72(3), 1035-1045.

Summary: This study investigated how Post-traumatic Stress Injuries (PTSI) programs and practices are implemented and how they are perceived by paramedics. Eight recurrent themes for addressing PTSI emerged: psychologically safe and healthy work culture; consistent supervisor support, mental health training and awareness, opportunities for recovery and maintaining resiliency, recognition of PTSI and its diverse risk factors, access to a variety of support initiatives for PTSI, communication during medical leave, and meaningful work accommodations. The authors also identified systemic challenges with co-ordination, resource allocation, and worker engagement. Overall, the paper calls for integration from eight organizational elements to address PTSI into existing managements systems to help overcome the systemic challenges currently being experienced.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Paramedics

Relevance: This paper suggests that the NPHWW should consider interventions and strategies that reduce PTSI for paramedics.

Priority Areas: Institutionalize and invest in well-being as a long-term value; Engage effective resources to minimize administrative burden

Duan, Y., Throne, T., Laconi, A., Song, Y., Saeidzadeh, S., Doupe, M., Norton, P. Estabrooks, C. (2025). Changing trends in job satisfaction and burnout for care aides in long-term care homes: the role of work environment. *JAMDA*, 26(2), doi: 10.1016/j.jamda.2024.105380.

Summary: This study examined the association between care unit work environments in long-term care homes and trends in care aides' job satisfaction and burnout. This was a retrospective longitudinal study using data from care aide surveys collected over 3 periods. The study included 631 care aides from a stratified sample of 84 LTC homes in 3 Canadian provinces. Between T1 and T2, care aides in care units with less favorable work environments characterized by less supportive leadership, weaker work culture, less effective team communication and feedback mechanisms, and insufficient structural resources and staffing experienced a statistically significant decline in job satisfaction and professional efficacy, along with an increase in exhaustion and in cynicism. Those in more favorable work environments exhibited no statistically significant changes in these variables during the same period. Moreover, care aides in

less favorable work environments continued to experience an increase in exhaustion from T2 to T3.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Support Workers

Relevance: This report suggests the NPHWW should explore more promising practices in resilience of the care aide workforce as information is currently lacking.

Priority Areas: Create and Sustain Positive Work and Learning Environments and Culture

Duong, D., & Vogel, L. (2023). Overworked health workers are “past the point of exhaustion”. *Canadian Medical Association Journal*, 195(8), E309–E310. <https://doi.org/10.1503/cmaj.1096042>

Summary: This article highlighted the prevalence of overworked healthcare practitioners during the pandemic and alerted readers to a crisis of workforce shortages and low capacity. The number of healthcare workers logging overtime increased significantly in the second year of the pandemic, and most healthcare practitioners reported working beyond their desired capacity. The authors echoed calls for system-level efforts to address burnout and overwork. Specifically, they mentioned streamlining and ensuring fair compensation for administrative work, increasing work-life balance through organizational changes, and integrating digital health tools into workflows.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This article underlines the importance and relevance of the NPHWW in addressing and mitigating practitioner burnout.

Priority Areas: Invest in measurement, assessment, and research; Engage effective resources to minimize administrative burden

Dyrbye, L. N., Major-Elechi, B., Hays, J. T., Fraser, C. H., Buskirk, S. J., & West, C. P. (2020). Relationship between organizational leadership and health care employee burnout and satisfaction. *Mayo Clinic Proceedings*, 95(4), 698–708. <https://doi.org/10.1016/j.mayocp.2019.10.041>

Summary: This paper explored the relationship between immediate supervisor leadership behaviours and burnout and the professional satisfaction of healthcare employees. The authors administered a two-question survey from the Maslach Burnout Inventory to non-physician healthcare employees on their immediate supervisor's leadership behaviours. Supervisor scores correlated with employee burnout and satisfaction: for every 1% increase in leadership scores, a 7% decrease and 11% increase in the odds of burnout and satisfaction, respectively, were correlated. The authors concluded that the leadership qualities of immediate supervisors related to burnout and satisfaction.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that the NPHWW may benefit from addressing leadership in healthcare systems to mitigate employee burnout and increase satisfaction.

Priority Areas: Create and sustain positive work and learning environments and culture

Dyrbye, L. N., Massie, F. S., Eacker, A., Harper, W., Power, D., Durning, S. J., Thomas, M. R., Moutier, C., Satele, D., Sloan, J., & Shanafelt, T. D. (2010). Relationship between burnout and professional conduct and attitudes among us medical students. *JAMA*, 304(11), 1173–1180.
<https://doi.org/10.1016/j.mayocp.2019.10.041>

Summary: This paper aimed to determine the relationship between measures of professionalism and burnout among US medical students. In the spring of 2009, a cross-sectional survey of all medical students attending 7 US medical schools was administered. The survey included the Maslach Burnout Inventory (MBI), the PRIME–MD depression screening instrument, and the SF-8 quality of life (QOL) assessment tool, as well as items exploring students' personal engagement in unprofessional conduct, understanding of appropriate relationships with industry, and attitudes regarding physicians' responsibility to society. Of the students who responded to all the MBI items, 52.8% had burnout. Cheating/dishonest academic behaviours were rare (endorsed by <10%) in comparison to unprofessional conduct related to patient care (endorsed by up to 43%). Only 14% of students had opinions on relationships with the industry consistent with guidelines for six scenarios. Students with burnout were more likely to report engaging in 1 or more unprofessional behaviours than those without burnout (35.0% vs 21.9%). Students with burnout were also less likely to report holding altruistic views regarding physicians' responsibility to society. For example, students with burnout were less likely to want to provide care for the medically underserved than those without burnout (79.3% vs 85.0%). After multivariable analysis adjusting for personal and professional characteristics, burnout was the only aspect of distress independently associated with reporting one or more unprofessional behaviours or holding at least 1 less altruistic view regarding physicians' responsibility to society. The authors concluded that burnout was associated with self-reported unprofessional conduct and less altruistic professional values among medical students at 7 US schools.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW may benefit from addressing professional conduct and professional values in strategies to mitigate physician burnout.

Priority Areas: Invest in measurement, assessment, and research

Dyrbye, L. N., Meyers, D., Ripp, J., Dalal, N., Bird, S. B., & Sen, S. (2018). A pragmatic approach for organizations to measure health care professional well-being. *NAM Perspectives*.
<https://doi.org/10.31478/201810b>

Summary: This paper addressed which survey tools were available for institutions to measure healthcare practitioners' burnout and composite well-being to support the development of accurate institutional performance measures, including burnout and quality improvement efforts. The paper found the following considerations important when administering institutional performance measures: ensuring a low respondent burden, a low organizational burden, actionable measures, sensitivity to change, psychometric strength, and broad application. The authors concluded that there are many considerations when measuring healthcare practitioners'

burnout and overall well-being and that most healthcare systems will be able to find a suitable instrument.

Type of Evidence: Expert opinion; Grey literature

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that the NPHWW should consider the most appropriate instrumentation tools for different settings and participants when measuring physician well-being and burnout.

Priority Areas: Invest in measurement, assessment, and research

Eastmond, C., Fernandes, S. (2025). Preventing healthcare worker burnout in primary care settings through the trauma-informed CARES leadership competency model. *Healthcare Management Forum*, 38(3), 221-228. <https://doi.org/10.1177/08404704241297074>

Summary: Healthcare institutions managerial response to staff burnout has largely been reactionary. Health leaders are beginning to acknowledge the significant role that trauma plays in impacting workers' propensity to experience burnout. The authors introduce the CARES model which is a leadership competency framework that underscores the connections between leadership competencies and employee-leader engagement to detect early signs of burnout in primary care workers. The CARES model refers to essential content knowledge, built through empathy-driven training and that health leader development should be supported through training on two main components: 1) the intersection between sociodemographic factors and well-being, and 2) the mental health impacts of workplace stress in primary care settings. The CARES model also includes a toolkit using objective question-based instruments that elucidates employee-centric factors of managerial concern. The authors also provide 3 organizational-level considerations for implementation: cultivate inclusive, trauma-informed environments where models such as CARES *enhance* leadership competency; organizational buy-in and support from top-down leadership are essential; implementing the model requires careful attention to administrative and logistical challenges, including resource allocation, staffing, and training.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This article suggests the NPHWW could explore the integration of the CARES model into professional clinical and health management training programs to support the well-being and sustainability of healthcare workers in a primary care setting.

Priority Areas: Create and sustain positive work and learning environments and culture

Eley, D. S., Leung, J., & Cloninger, K. M. (2022). A longitudinal cohort study observed increasing perfectionism and declining resilience, ambiguity tolerance and calling during medical school, which is not explained by student personality. *BMC Medical Education*, 22(1), 784. <https://doi.org/10.1186/s12909-022-03850-5>

Summary: This study looked at changes in proxies of well-being in first—and fourth-year medical students and compared them with personality traits to contribute to the literature on poor

mental well-being among students. Longitudinal study administered in 1st year and 4th year to medical students. The survey assessed temperament and character personality, perfectionism-concern over mistakes, ambiguity tolerance, resilience, calling to medicine, and demographics. The temperament and character profile were in line with previous studies and described a mature personality. Over four years, the level of perfectionism-concern over mistakes significantly increased, while resilience, ambiguity tolerance, and calling to medicine decreased. Harm avoidance, persistence, self-directedness, and cooperativeness at baseline (1st year) significantly predicted levels of these traits at follow-up but were weak, as were correlations. Most 1st year medical students have mature personalities with an industrious temperament and adaptable character. Over four years of medicine, however, ambiguity tolerance, resilience, and calling to the profession declined while perfectionism increased, which is often associated with poor mental health and psychological distress.

Type of Evidence: Cohort [longitudinal]; Peer-reviewed

Quality: Poor; The results of this study are limited by the absence of standalone indicators for well-being. The authors have used a single set of indicators to measure both personality and well-being, which inhibits the internal validity of the overall findings.

Health Workforce Profession: Physicians

Relevance: The findings suggest that the NPHWW may benefit from examining the education environment as a determinative factor in psychological well-being decline.

Priority Areas: Create and sustain positive work and learning environments and culture

Fahrenkopf, A. M., Sectish, T. C., Barger, L. K., Sharek, P. J., Lewin, D., Chiang, V. W., Edwards, S., Wiedermann, B. L., & Landrigan, C. P. (2008). Rates of medication errors among depressed and burnt-out residents: Prospective cohort study. *BMJ*, 336(7642), 488–491.
<https://doi.org/10.1136/bmj.39469.763218.BE>

Summary: This paper sought to determine the prevalence of depression and burnout in pediatric residents to determine whether a relation exists between the disorder and medication errors. Depressed residents made 6.2 times as many medication errors per resident per month as residents who were not depressed. Burnt-out residents and non-burnt-out residents made similar rates of errors per resident per month. The authors concluded that depressed residents made significantly more medical errors than their non-depressed peers; however, burnout did not seem to correlate with increased medical errors.

Type of Evidence: Cohort [prospective]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper may provide the NPHWW with a more in-depth understanding of the impacts (or lack thereof) of depression and burnout on medical performance in pediatric residents. The findings suggest addressing depression amongst residents is important for mitigating medical errors.

Priority Areas: Invest in measurement, assessment, and research

FDI World Dental Federation. (2024). Mental health and well-being for oral health professionals and dental students. *International Dental Journal*, 74: 159-160. <https://doi.org/10.1016/j.identj.2023.10.005>

Summary: International studies have shown that dentists are among those healthcare providers particularly prone to burnout, and the COVID-19 pandemic has exacerbated this trend. Various stressors in the dental professional can lead to a burnout syndrome of the practitioner and dental team. Protecting the mental health of oral health professionals and dental studies in a preventative way should be of high importance to ensure that the professionals can serve their community. The authors advocate that the stigma of mental illness should end and encourage the National Dental Associations to raise awareness of the importance of mental health, create support resources, proactively discuss mental health with dental teams and offer recurrent training, seminars and webinars for all members of the dental team.

Type of Evidence: Policy [recommendations based on consensus]; Peer-reviewed

Quality: Moderate; Evidence gathering and methods informing recommendations not clearly stated

Health Workforce Profession: Dentists; Dental Hygienists; Dental Assistants

Relevance: This policy statement suggests the NPHWW should encourage professional dental associations/networks to provide enhanced mental health support to their members, and advocate on behalf of all members of the dental health.

Priority Areas: Support mental health and reduce stigma

Fuseini, S. (2024). "Suffering in silence": How social workers in child welfare practice experience and manage burnout. *Children and Youth Services Review*, 166, 107939. <https://doi.org/10.1016/j.childyouth.2024.107939>

Summary: This paper investigates how the challenges faced by social workers in child welfare (e.g., tensions, contradictions, ambiguities) result in burnout and how that burnout is managed. 18 semi-structured interviews with frontline child welfare workers revealed that burnout is common and social workers employ a number of self-care strategies and practices to manage it. Recommendations call for child welfare agencies to support their staff by validating emotional challenges, strengthening peer support, and promoting self-care, such as subsidized fitness memberships.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Social Workers

Relevance: This paper suggests the NPHWW may benefit from validating social worker's experiences and formally promoting and facilitating self-care.

Priority Areas: Create and sustain positive work and learning environments and culture

Gaudreau, P., Schellenberg, B. J. I., Gareau, A., Kljajic, K., & Manoni-Millar, S. (2022). Because excellencism is more than good enough: On the need to distinguish the pursuit of excellence from the pursuit of perfection. *Journal of Personality and Social Psychology*, 122(6), 1117–1145. <https://doi.org/10.1037/pspp0000411>

Summary: This paper presented the results of the first empirical test of the Model of Excellencism and Perfectionism (MEP) to contribute to the understanding of whether perfectionism is beneficial, harmful, or unneeded and distinguish the pursuit of excellence from perfectionism. Tested the conceptual, functional, and developmental distinctiveness of excellencism and perfectionism in 5 studies. Study 1 was exploratory and confirmed the hypothesized two-factor structure of the perfectionism-excellencism scale. Study 2 showed perfectionism was not associated with additional benefits (life satisfaction) or harms (depression). Studies 3–4 showed that the academic achievement of undergraduates was worse for perfectionists than excellencists. Study 5 showed excellencism and perfectionism were associated with an upward and downward spiral of academic development in undergraduates. The authors concluded that perfectionism is either unneeded or harmful.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW may benefit from avoiding and/or discouraging perfectionism in medical training and practice as it is neither needed nor beneficial.

Priority Areas: Create and sustain positive work and learning environments and culture

Hancock, J., Witter, T., Comber, S., Daley, P., Thompson, K., Candow, S., Follet, G., Somers, W., Collins, C., White, J., Kits, O. (2020). Understanding burnout and moral distress to build resilience: a qualitative study of an interprofessional intensive care unit team. *Canadian Journal of Anesthesiologists*, 67, 1541-1548. <https://doi.org/10.1007/s12630-020-01789-z>

Summary: The purpose of this study was to explore the personal and organizational factors that contribute to burnout and moral distress in a Canadian academic intensive care unit healthcare team. The authors employed a qualitative study using focus groups to understand stakeholders' perspectives on burnout and moral distress in the ICU 6 focus groups were held with 35 participants and the themes that emerged across the professions included: 1) organizational issues, 2) exposure to high-intensity situations, and 3) poor team experiences. Participants provided suggestions for interventions to build resilience which included: 1) Organizational; improving staffing, investing in education, improving infrastructure. 2) exposure to high intensity situations: regular debriefing sessions, destigmatizing supports, long-term follow up on chronic patients, addressing workplace violence. 3) Poor-team experiences; professional relationship building, respectful communication and behaviour, acknowledgement of good work, hospital leadership engagement.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Relevance: This study suggests the NPHWW should address these three domains (organizational issues, exposure to high-intensity situations and poor team experiences) to improve moral and resilience among ICU teams.

Health Workforce Profession: Nurses; Respiratory Therapists; Physicians

Priority Areas: Invest in measurement, assessment, and research; Support mental health and reduce stigma; Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Harry Cummings and Associates. (2019). *National healthy and respectful workplace survey results*. Canadian Dental Assistants Association. <https://cdaa.ca/assets-images/advocacy/documents/2018-CDAA-Healthy-and-Respectful-Workplace-Survey-Report.pdf>

Summary: This article examines the impact of harassment on the dentistry workforce and presents the results of a comprehensive survey on the prevalence and scope of harassment in dental workplaces. Key findings reveal that 46% of workplaces lack formal anti-harassment policies or measures. Even in workplaces with policies, a significant number of respondents felt undecided or believed the policies were inadequate. The article also discusses the types of harassment policies, the frequency of harassment incidents, factors influencing decisions not to act, and potential solutions to address these issues.

Type of Evidence: Analytical cross-sectional [quantitative]; Grey literature; Canada

Quality: Poor; Chi-square tests were inappropriately applied to continuous variables (e.g., age, years in practice). No effect sizes (e.g., Cohen's *w*, *Phi*) were reported, limiting interpretation of practical significance. Additionally, the use of validated workplace harassment measures could have improved the study's validity.

Health Workforce Profession: Dental Assistants

Relevance: This report suggests the NPHWW should examine effective policies for preventing and mitigating harassment to support dental workforce wellbeing.

Priority Areas: Create and sustain positive work and learning environments and culture

Harry Cummings and Associates. (2023). *Job market, compensation and benefits survey*. Canadian Dental Assistants Association. <https://cdaa.ca/assets-images/advocacy/documents/2022-CDAA-Job-Market-Compensation-and-Benefits-Survey-Report.pdf>

Summary: The report aims to guide decision-making for those considering a career in dental assisting, current dental assistants seeking to enhance their skills, employers of dental assistants, and other stakeholders interested in the training and practice of dental assistants. It includes a survey of working professionals that covers various aspects of well-being, such as workplace conditions, benefits, the impact of the pandemic, and overall job satisfaction.

Type of Evidence: Analytical cross-sectional [quantitative]; Grey literature; Canada

Quality: Moderate; strong descriptive reporting and a large national sample, but key limitations—volunteer (non-probability) sampling, ~15% response rate, under-representation in some provinces (e.g., Quebec), and no weighting or confidence intervals—introduce risk of selection and non-response bias, so the prevalence estimates shouldn't be treated as precise population figures.

Health Workforce Profession: Dentists; Dental Hygienists; Dental Assistants

Relevance: This provides baseline data on the work environment for dental health professionals that can inform the NPHWW.

Priority Areas: Invest in measurement, assessment, and research.

Health Canada. (2022). *Report of the health human resources symposium*. Government of Canada.

<https://www.canada.ca/en/health-canada/services/health-care-system/health-human-resources/summary-report-symposium.html>

Summary: This report on the 2022 Health Human Resources (HHR) Symposium aimed to address Canada's HHR crisis, especially post-COVID, by gaining perspectives from multidisciplinary experts. Members of federal and provincial/territorial governments thought leaders, regulators, professionals, and educators participated in the Symposium, which was grounded in the key takeaways of the HHR stakeholder roundtables on April 4-8, 2022. The areas of focus included recruitment for future needs, retention of healthcare workers, workforce mental health and well-being, data to support effective planning & engagement, and productivity of models of care. Prioritized solutions included creating a pan-Canadian health force data strategy, enabling team-based modes of care, creating positive work environments, creating a health workforce retention strategy, increasing representation of equity-deserving groups, and coordinating a pan-Canadian approach to post-secondary education and programs leveraging internationally educated health workers. There was a clear consensus that collaboration amongst all stakeholders would be required to advance the solutions and address the HHR crisis. Short-, medium-, and long-term actions for each prioritized solution were identified.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This report highlighted experts' assessments of the key priority areas for addressing the HHR crisis. The NPHWW may benefit from addressing and/or aligning programming with the same priority areas to maximize efficacy.

Priority Areas: Invest in measurement, assessment, and research; Engage effective resources to minimize administrative burden; Recruit and retain a diverse and inclusive health workforce

Health Canada. (2023). *Nursing retention toolkit: Improving the working lives of nurses in Canada*. Government of Canada.

<https://www.canada.ca/content/dam/hc-sc/documents/services/health-care-system/health-human-resources/nursing-retention-toolkit-improving-working-lives-nurses/nursing-retention-toolkit-improving-working-lives-nurses.pdf>

Summary: This toolkit was developed to support nursing retention, given the acute nurse shortages observed across Canada and internationally. Co-created by a professional group of Canadian nursing community members brought together in 2023 in a Nursing Retention Forum by Canada's Chief Nursing Officer. The toolkit is oriented around eight themes and initiatives: inspired leadership; flexible and balanced ways of working; organizational mental health and wellness supports; professional development and mentorship; reduced administrative burden; strong management and communication; clinical governance and infrastructure; and safe staffing practices. Five guiding principles guided these initiatives: actionable, values-based, high-impact, organization-focused, and future-focused. The authors recommended that employers and organizations utilize the toolkit to enhance current working conditions and adopt and implement best practice initiatives based on the most relevant themes to their context.

Type of Evidence: Policy [recommendations]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Nurses

Relevance: This toolkit suggests the NPHWW should aim to address some or all of the identified themes and initiatives in interventions and strategies targeting nurse practitioners' wellbeing.

Priority Areas: Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Healthcare Excellence Canada. (2024a). Basic radiological technician program provides specialized training for x-ray procedures across Nunavut. *Promising Practice Summaries.*

https://www.healthcareexcellence.ca/media/5adkd34v/20230224_basic-radiological-technician-program-provides-specialized-training-for-x-ray-procedures-across-nunavut.pdf

Summary: This report presented a key strategy to strengthen and retain the health workforce in Nunavut to support Inuit employment and illustrate an investment in health human resources. A Basic Radiological Technician (BRT) program was developed in 2018 by the Nunavut Department of Health and the Ontario Association of Medical Radiation Sciences and vetted through evaluations and surveys. The BRT program was delivered to more than 60 people in 25 communities. It positively affected the workplace by facilitating better task sharing, distributing more manageable workloads across members of care teams, and empowering local community members to take a more direct role in providing healthcare. The authors concluded that the key success factors of the program were bringing specialized training to Inuit employees rather than training folks outside the community, receiving ongoing support from the program developers, and developing specialized healthcare for Inuit by Inuit.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Medical Radiation Technologists

Relevance: This article suggests that the NPHWW should consider developing local training programs like the BRT to help strengthen remote, rural, and northern care teams.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce.

Healthcare Excellence Canada. (2024b). Creating a meaningful work-life balance for the staff of Churchill Health Centre. *Promising Practice Summaries.*

https://www.healthcareexcellence.ca/media/tnjasluk/20230214_creating-a-meaningful-work-life-balance-for-staff-of-churchill-health-centre.pdf

Summary: This report presented a strategy for promoting retention of nursing staff in northern Manitoba. A meaningful work-life balance strategy was built with input from employee engagement surveys. Nurse scheduling and workplace procedures underwent a series of modifications, including shifting to 12-hour shifts, paid at 11.63 hours, to introduce four unpaid shifts per year that can be used as a buffer or travel day around vacations, aiming to honour all vacation requests and providing a reason for any denials; ensuring the workplace is culturally safe through a land-based mental health program for all staff; providing new staff with an extra week of vacation; and other benefits. The report concluded that these measures were successful, as a full-time nurse has not left the community since June 2020.

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Nurses

Type of Evidence: Narrative [case study]; Grey literature

Relevance: This report suggests the NPHWW should consider adapting the scheduling and other benefits provided to nurses in northern Manitoba to strengthen retention and improve work-life balance.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024c). Implementing a physician assistant program to promote retention within Ongomiizwin health services. *Promising Practice Summaries*.
https://www.healthcareexcellence.ca/media/wofdrcl/20230224_implementing-a-physician-assistant-program-to-promote-retention-within-ongomiizwin-health-services.pdf

Summary: This report identified a key strategy for promoting physician retention in northern, rural, and remote communities to provide critical capacity and support for the community. The Ongomiizwin Health Services (OHS) developed a physician extender pilot program in 2019. The program entailed including physician assistants in clinical teams to improve workflows, further support nurses, and free up physicians to pay attention to complex cases and critical care. The report concluded that the program delivered an additional 10,000+ hours of clinical service to remote – particularly First Nations – communities, improved service delivery, and alleviated significant pressures on the care team.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Physicians; Nurses; Physician Assistants

Relevance: The report suggests that the NPHWW should consider adapting the physician assistants program to enable greater work-life balance and strengthen physician retention in remote, rural, and northern areas.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024d). Nursing practice council – An approach to engage and retain staff in Manitoba's Northern Health region. *Promising Practice Summaries*.
https://www.healthcareexcellence.ca/media/45xfzhnk/20230224_nursing-practice-council-an-approach-to-engage-and-retain-staff-in-manitoba-s-northern-health-region.pdf

Summary: This report presented a key strategy for retaining nursing staff in northern regions. The Nursing Practice Council (NPC) – a structured, safe environment through which nurses can report concerns and incidents and make recommendations to improve the profession – was established in 2015 and was assessed by job satisfaction and engagement and a retention survey. The NPC resulted in improved quality of care for patients, created processes for front-line staff to adopt evidence-based practices, identified gaps, challenges, and solutions to problems in the nursing profession, created a forum for nurses to share expertise, and so forth. The report concluded that the NPC was associated with improved job satisfaction and engagement of nurses – both of which contributed to improved retention.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Nurses

Relevance: The report suggests that the NPHWW should consider adapting the NPC program to strengthen nursing retention in rural, remote, and northern communities.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024e). Recruitment of permanent part-time physicians – A successful approach to long-term physician retention. *Promising Practice Summaries*. https://www.healthcareexcellence.ca/media/gjmfas4d/20230214_recruitment-of-permanent-part-time-physicians-a-successful-approach-to-long-term-physician-retention.pdf

Summary: This report outlined a key strategy for promoting physician retention through part-time positions. The Ongomiizwin Health Services (OHS) was developed to replace antiquated employment models in which physicians were only hired on a full-time basis. The revised employment model was rooted in Indigenous leadership, recruiting physicians who wanted to work for communities, establishing a charter with clear expectations, replacing locums with part-time FTEs, reaching out to locals in medical training programs, and regularly engaging with physicians to share information and address evolving concerns. The report concluded that the revised model improved retention rates and reduced overall vacancy rates to an average of 20% from 70-80%.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Physicians

Relevance: This report suggests that the NPHWW should consider adapting the part-time employment model for physicians in northern, rural, and remote regions to strengthen recruitment and retention.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024f). Roadmap to strengthen the Nunavut nursing workforce. *Promising Practice Summaries*. https://www.healthcareexcellence.ca/media/u5afiyql/20230224_roadmap-to-strengthen-the-nunavut-nursing.pdf

Summary: This report identified a key strategy for health workforce retention. The strategy was informed by the Nunavut nursing workforce, previous strategies, a peer and grey literature review, an environmental scan, and consultations with key stakeholders. The resulting Roadmap to Strengthen Nunavut Nursing Workforce (2021 to 2026) included a mission, vision, and strategic goals, and strategic pillars were successful in prioritizing health leadership initiatives, engaging nurses across the territory, sharing decision-making, and taking an evidence-informed approach. The report concluded that retention improved based on a comprehensive evaluation, a feasibility study, and retention-specific indicators.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate. Reputable Canadian healthcare agencies produce this practice-based summary; however, it does not refer to extant literature.

Health Workforce Profession: Nurses

Relevance: This report suggests that the NPHWW should consider adapting the roadmap for interventions and strategies aimed at improving nursing retention.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024g). The triad leadership model within Island Health: Enhanced and culturally appropriate leadership structures. *Promising Practice Summaries*.

https://www.healthcareexcellence.ca/media/spxlwdyn/20230214_the-triad-leadership-model-within-island-health-enhanced-and-culturally-appropriate-leadership-structures.pdf

Summary: This report presented a leadership model for promoting the retention, design, and delivery of culturally safe services in northern, rural and remote communities. The triad leadership model (TLM) was developed through a partnership between Island Health and Indigenous community leaders to take the traditional dyad model of operational and medical team management and integrate a third Indigenous health manager. The TLM resulted in improved relationships between health practitioners, local communities, and First Nation leadership, as well as the address of untoward events, greater collaboration, and increased engagement opportunities with outreach communities. The report concluded that although challenges also arose from the model, the TLM had important positive impacts and would be spread across other geographies.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate; This practice-based summary does not refer to extant literature.

Health Workforce Profession: All Health Professions

Relevance: This report suggests the NPHWW should consider appointing a third Indigenous health manager to leadership teams where promoting retention, design, and delivery of culturally safe services is paramount.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

Healthcare Excellence Canada. (2024h). Virtual triage: An approach to supporting on-call community health nurses. *Promising Practice Summaries*.

https://www.healthcareexcellence.ca/media/tjhmva51/20230214_virtual-triage-an-approach-to-supporting-on-call-community-health-nurses.pdf

Summary: This report presented a strategy for providing community health nurses with opportunities for respite during on-call shifts in order to improve retention rates. The virtual triage program was developed based on a three-month pilot program in 2022, which underwent an evaluation and engagement with key stakeholders. The program availed trained virtual community health nurses and nurse practitioners from in and out of the territory, with experience working in Nunavut, to support the community's on-call services, which resulted in reduced stress

for on-call workers. The report concluded that on-call workers experienced improved sleep and decreased stress and anxiety due to the added support, which further benefitted patients.

Type of Evidence: Narrative [case study]; Grey literature

Quality: Moderate; This practice-based summary does not refer to extant literature.

Health Workforce Profession: Nurses; Nurse Practitioners

Relevance: This report suggests that the NPHWW should consider integrating virtual triage programs to support on-call nurses and improve retention in rural, remote, and northern areas.

Priority Areas: Invest in measurement, assessment, and research; Recruit and retain a diverse and inclusive health workforce

HealthCareCAN. (2022). Strengthening the foundation of healthcare in Canada: Actions to shore up healthcare and health research in Canada. <https://www.healthcarecan.ca/our-work/bolster-canadas-health-workforce/>

Summary: This report identified key priority areas for short-term and long-term federal action that aim to address the growing workforce shortages. The authors highlighted Statistics Canada's research on the health workforce in the pandemic: 33% of health workers reported fair to poor mental health; 70% reported their mental health was somewhat or much worse compared to 2020; 56% reported they were quiet or extremely stressed most days. The Committee recommended the following actions: implement a pan-Canadian health workforce planning strategies; leverage immigration and internationally trained healthcare workers; support interprovincial/territorial coordination of education and licensing; collaborate with provincial and territorial governments, regulators, and educational institutions to train more Canadian healthcare workers – particularly from Indigenous communities; support health, wellness, safety and resilience in the healthcare workforce by expanding research, programs and resources.

Type of Evidence: Expert opinion; Grey literature; Canada

Quality: Moderate; The evidence gathering and methods informing recommendations are not clearly stated.

Health Workforce Profession: All Health Professions

Relevance: This report suggests that the NPHWW is appropriately focused and should concentrate on interventions that strengthen collaboration between partners and support health, wellness, safety, and resilience.

Priority Areas: Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Hill, A., & Curran, T. (2015). Multidimensional perfectionism and burnout: A meta-analysis. *Personality and Social Psychology Review*, 20. <https://doi.org/10.1177/1088868315596286>

Summary: This meta-analysis examined the relationship between multidimensional perfectionism and burnout in peer-reviewed studies from 1990 to 2014. It examined relationships before and after, controlling for the relationship between dimensions of perfectionism and whether relationships were moderated by the domain (work, sport, or education). Across all studies, it was found that perfectionistic strivings had small negative or non-significant relationships with overall burnout and symptoms of burnout; however, after controlling for the relationship between dimensions of perfectionism, “pure” perfectionistic strivings displayed notably larger negative

relationships. In terms of moderation, in some cases, perfectionistic strivings were less adaptive, and perfectionistic concerns were more maladaptive in the work domain. The findings suggest that perfectionistic concerns warrant attention when considering vulnerability to burnout.

Type of Evidence: Systematic review [meta-analysis]; Peer-reviewed

Quality: Moderate; Quality assessment of the included studies was not reported, though they do discuss several methods for flattening out differences between studies.

Health Workforce Profession: All Health Professions

Relevance: This meta-analysis suggests the NPHWW should consider the role of perfectionism in burnout when developing prevention strategies.

Priority Areas: Invest in measurement, assessment, and research

Hilty, D. M., Groshong, L. W., Coleman, M., Maheu, M. M., Armstrong, C. M., Smout, S. A., ... & Krupinski, E. A. (2023). Best practices for technology in clinical social work and mental health professions to promote well-being and prevent fatigue. *Clinical Social Work Journal*, 51(3), 211-245.

Summary: This scoping review from 2000 to 2021 of 15 databases focused on best practices for clinical social workers to maintain emotional well-being, prevent fatigue, and avoid burnout when using technology. The impact of using technologies were investigated in four areas: (1) behavioral, cognitive, emotional, and physical impact; (2) individual, clinic, hospital, and system/organizational levels; (3) well-being, burnout, and stress; and (4) clinician technology perceptions. The use of video and electronic health records are associated with clinician physical and emotional problems due to barriers, effort, cognitive demands, and additional workflow steps. Clinical social workers and health care systems must evaluate the impact of technology in order to support well-being and prevent workload burden, fatigue, and burnout.

Type of Evidence: Systematic Review [scoping]; Peer-reviewed

Quality: Moderate; Quality assessment of the included studies was not reported, though they do discuss several methods for flattening out differences between studies.

Health Workforce Profession: Social Workers; Psychologists; Psychotherapists

Relevance: This scoping review identifies the impact of healthcare technologies and provides evaluation, clinical, human factor, training/professional development and administrative best practices.

Priority Areas: Engage effective resources to minimize administrative burden; Institutionalize and invest in well-being as a long-term value

International Conference on Health Promoting Universities & Colleges (7th: 2015: Kelowna, B.C.). (2015). *Okanagan Charter: An international charter for health-promoting universities & colleges.*

Summary: The Charter was designed to guide action by providing a framework reflecting the latest concepts and principles for advancing health promotion, generating dialogue and research on health promotion, and mobilizing cross-sector action for integrating health policies and practices. Health promotion is characterized as emphasizing the interconnectedness between individuals and their environments and recognizing that health is created and lived by people within the settings of their everyday lives, where they learn, work, play and love. A health promotion action framework with key principles was identified. The Charter recommended that higher education institutions embed health into all aspects of campus culture across the

administration, operations, and academic mandates and that health promotion action be taken locally and globally.

Type of Evidence: Policy [consensus]; Grey literature;

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This Charter suggests that the NPHWW should consider health interventions and strategies that use collaborative approaches at the campus level.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Itchhaporia, D. (2021). The evolution of the Quintuple Aim: health equity, health outcomes and the economy. *Journal of the American College of Cardiology*, 78(22), 2262–2264.
<https://doi.org/10.1016/j.jacc.2021.10.018>

Summary: This article provided an overview of the ‘Quintuple Aim’ of healthcare improvement, which focuses on health equity, clinician well-being, and the pursuit of better health, improved outcomes, and lower costs. The Quintuple Aim evolved from the triple aim (improve patient experience, better outcomes, lower costs) and the quadruple aim (adding clinician well-being) to add health equity or the social determinants of health. The article concluded that the Quintuple Aim has the potential to be a game changer, not just for society but for the economy as well.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This article suggests that the NPHWW reinforces the notion that clinician well-being is essential to an effective healthcare system and invites consideration of the other four aims of developing the plan.

Priority Areas: Engage effective resources to minimize administrative burden

James, Y., & Lawford, K. (2019). Factors, realities, and experiences of employment as a dental assistant in Canada: Final report on a national survey of Canadian dental assistants. Pan-Canadian Health Human Resources Network, University of Ottawa. <https://cdaa.ca/assets-images/advocacy/documents/2019-Factors-Realities-and-Experiences-in-Employment-as-a-Dental-Assistantsin-Canada-Report.pdf>

Summary: This report examines the work experiences of dental hygienists in Canada to address a significant research gap and support future studies aimed at identifying effective recruitment and retention strategies. Key findings reveal that dental assistant (DA) career trajectories are often marked by experiences of harassment, leading to either a complete exit from the profession or a search for a safer and healthier workplace. The data presented in this report suggests that the issue may not be a shortage of DAs entering the field, but rather a high turnover rate due to experiences of harassment, disrespect, and inadequate remuneration.

Type of Evidence: Descriptive cross-sectional

Quality: Moderate; No use of validated measures to assess job satisfaction or workplace health/wellbeing.

Health Workforce Profession: Dental Assistants

Relevance: This suggests that NPHWW should develop targeted strategies for harassment in the dental workforce to support greater wellbeing, recruitment, and retention of dental assistants.

Priority Areas: Create and sustain positive work and learning environments and culture

Jelen, A., Goldfard, R., Rosart, J., Graham, L., & Rubin, B. B. (2024). A qualitative co-design-based approach to identify sources of workplace-related distress and develop well-being strategies for cardiovascular nurses, allied health professionals, and physicians. *BMC Health Services Research* 24, 246. <https://doi.org/10.1186/s12913-024-10669-x>

Summary: This study explores the complex issue of clinician distress and its impact on workforce wellbeing within a Canadian quaternary hospital network. Through a three-phase qualitative investigation involving nurses, allied health professionals, and physicians, researchers identified five key workplace-related drivers of distress: lack of team support, diminished joy in work, overwhelming workloads, limited professional development, and poor leadership communication. To address these challenges, clinicians collaboratively designed four targeted interventions: revamping daily safety huddles, establishing a nursing mentorship program, launching a value-focused newsletter, and introducing an employee experience platform. These findings offer actionable strategies for healthcare organizations to enhance clinician wellbeing and foster a more supportive work environment.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians; Nurses; Allied Health Professions (undefined)

Relevance: This suggests that the NPHWW should consider implementing collaborative, clinician-informed interventions such as mentorship programs, improved communication strategies, and platforms for employee engagement to proactively address workforce distress and promote overall wellbeing.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Karnieli-Miller, O., Taylor, A. C., Cottingham, A. H., Inui, T. S., Vu, T. R., & Frankel, R. M. (2010). Exploring the meaning of respect in medical student education: an analysis of student narratives. *Journal of General Internal Medicine*, 25(12), 1309–1314. <https://doi.org/10.1007/s11606-010-1471-1>

Summary: This paper described third-year medical students' narratives of respect and disrespect [(dis)respect] during their internal medicine clerkship to contribute to the literature on the meaning of respect in medicine. Qualitative thematic analysis of 152 third-year student narratives that 'taught them something about professionalism,' focusing on (dis)respect. It was found that 2/3 of the narratives were negative (describing instances of disrespect rather than respect). The content of the (dis)respect narratives presented six themes: (1) content and manner of communication (including appreciating or belittling, being sensitive or blunt and respecting privacy); (2) conduct: behaviours expressing (dis)respect; (3) patient-centeredness: honouring others' preferences, decisions and needs; (4) treating others as equals; (5) valuing the other and their experience and problem; and (6) nurturing students' learning. Respect seemed to entail responding to a need, while disrespect involved ignoring the need or bluntly violating it.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests that the NPHWW should consider practitioners' concept and experience of respect in their practice as an important component of effective healthcare.

Priority Areas: Create and sustain positive work and learning environments and culture

Kassam, A., Antepim, B., & Sukhera, J. (2024). A mixed methods study of perceptions of mental illness and self-disclosure of mental illness among medical learners. *Perspectives on Medical Education*, 13(1), 336–348. [https://doi.org/ 0.5334/pme.1152](https://doi.org/0.5334/pme.1152)

Summary: This paper sought to measure perceptions toward mental illness and explore perceptions of self-disclosure of mental illness in medical learners to contribute to the literature on mental illness stigma in medical education and healthcare. Mixed-methods, sequential design, using the Opening Minds Scale for healthcare providers, Self Stigma of Mental Illness Scale, and qualitative semi-structured interviews. Resident physicians had more negative attitudes toward mental illness and disclosure. Males had more negative attitudes than females. Racialized learners scored higher on self-stigma. Interview data suggested that disclosure was fraught with tensions but perceived as having a positive outcome. The authors determined that medical learners internalize norms regarding mental illness, disclosure, vulnerability, and what constitutes a competent or effective physician. The disclosure was seen as difficult, fraught with tension, and varied according to the developmental stage in training. The experience of disclosure varied with identity. Participants confirmed there was a double standard or hypocrisy in medical education regarding disclosure – fear of which worsened over time.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should address the stigma around disclosure to better support medical professionals' well-being and remain sensitive to the intersectional aspects of disclosure when planning initiatives and interventions.

Priority Areas: Support mental health and reduce stigma; Invest in measurement, assessment, and research

Kelm, Z., Womer, J., Walter, J. K., & Feudtner, C. (2014). Interventions to cultivate physician empathy: A systematic review. *BMC Medical Education*, 14(1), 219. <https://doi.org/10.1186/1472-6920-14-219>

Summary: This paper synthesized published literature regarding interventions that were quantitatively evaluated to detect changes in empathy among medical students, residents, fellows, and physicians to contribute to the understanding of the decline in empathy in medical school, given the importance of empathy in delivering effective patient care and systematically searched PubMed, EMBASE, Web of Science and PsychINFO in June of 2014 to identify articles that quantitatively assessed changes in empathy due to interventions among medical students, residents, fellows and physicians. Sixty-four articles met the inclusion criteria; however, only 10 used a rigorous study design. Of those 10, 8 showed that targeted intervention strategies increased empathy. The authors concluded that methodological weaknesses limit current empathy intervention literature; however, physician empathy has been shown to increase through interventions.

Type of Evidence: Systematic review [narrative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests, albeit with relatively limited evidence, that the NPHWW should pursue targeted interventions to enhance physician empathy in medical school, given the importance of empathy in facilitating better patient health.

Priority Areas: Create and sustain positive work and learning environments and culture

Khan, N., Palepu, A., Dodek, P., Salmon, A., Leitch, H., Ruzyski, S., Townson, A., & Lacaille, D. (2021). Cross-sectional survey on physician burnout during the COVID-19 pandemic in Vancouver, Canada: The role of gender, ethnicity and sexual orientation. *BMJ Open*, 11(5), e050380.

<https://doi.org/10.1136/bmjopen-2021-050380>

Summary: This paper sought to determine the prevalence of physician burnout during the pandemic and examine the differences by gender, ethnicity, and sexual orientation. This cross-sectional survey of internal medicine physicians at two academic hospitals in Vancouver, Canada. They used the Maslach Burnout Inventory. The prevalence of burnout was 68%, and the low feeling of personal accomplishment was 22%. Women were more likely to report emotional exhaustion and low personal accomplishment than men. Visible ethnic minority physicians were more likely to report lower personal accomplishments than white physicians. There was no difference in emotional exhaustion or depersonalization based on ethnicity or sexual orientation. Those who reported COVID-19-impacted burnout were more likely to report any burnout and consider quitting or quitting. The authors concluded that the pandemic coincided with burnout for every 2 out of 3 internal medicine physicians. Women, ethnic minority physicians, and those who felt COVID-19 impacted their burnout were more likely to report components of burnout.

Type of Evidence: Descriptive cross-sectional; Peer-reviewed; Canada

Quality: Moderate; The adequacy of the sample size is unclear, and the wide range of response rates across practice areas is not addressed in the sampling design and data analysis.

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should address women, ethnic minority physicians, and those who perceived an impact from COVID on their burnout to develop effective intervention strategies. It also suggests there may be an important relationship between women and ethnic minority physicians and feelings of low personal accomplishment.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Khatami, A., Marcus, J., Arslan, F., Guergachi, A., & Keshavjee, K. (2024). Towards a regulatory framework for electronic medical record interoperability in Canada. In the role of digital health policy and leadership. *Studies in Health Technology and Informatics*, February, 59–63.

<https://doi.org/10.3233/SHTI231312>

Summary: This paper provided requirements for electronic health record regimes to reduce healthcare provider burnout, improve compliance and efficiency, and support improved patient safety, experience, and outcomes. The study used the Institute of Healthcare Improvement's Failure Modes and Effects Analysis (FMEA) tool, focusing on five main potential points of failure: scheduling, communications, referrals, laboratory and diagnostic imaging testing, and prescriptions were the five main points of failure. The solutions were 'brainstormed'. The results showed that the inability to detect patients falling through the cracks in key areas led to significant

diagnostic and treatment delays, worsening disease and increasing health system utilization. Siloed information also limited providers' ability to make the best clinical decisions, but unplanned interoperability could potentially increase the noise ratio significantly, adding to burnout and system inefficiency. The authors recommended that interoperability requirements focus on helping clinicians better detect when patients are falling through the cracks and follow up on them. Given that the number of 'defects' in the process will likely be astronomically high, they also recommended that interoperability include robust risk profiling to ensure that those patients who are at the highest risk of complications and health system utilization are targeted first and that priority cases are not buried under an avalanche of missed visits, diagnostic testing, prescription abandonment, etc.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; Limited information was provided on the methodology used to arrive at the risk profile ratings and their practical relevance.

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW may benefit from integrating the recommended interoperability requirements to help reduce administrative burden and combat burnout.

Priority Areas: Engage effective resources to minimize administrative burden

Kolobaric, N., Milone, B., Salman, M., Buh, A., Biyani, N., Wafy, G., Fund, S. G., Scott, M., Kiska, R., Kang, R., Lee, K., Syed, S., Gibb, M., Dhaliwal, S., Myran, D., Maskerine, C., Brown, P. A., Akbari, A., Hundemer, G., Tanuseputro, P., Fremont, D., Spilg, E., Sood, M. M. (2025). Effectiveness of Wellness program interventions to improve physician wellness: a systematic review. *BMC Health Services Research*, 25(908), <https://doi.org/10.1186/s12913-025-12934-z>

Summary: Physician wellness programs are being implemented to offset rises in physician burnout. Insights into the effectiveness of these programs and to whom they are being offered, remains unclear. Using a systematic review, 36 peer-reviewed published studies that qualitatively and/or quantitatively measured outcomes of wellness interventions for practicing physicians were reviewed. The authors found that interventions were heterogeneous and included group therapy, stress reduction strategies, time off/workload reductions, education, and peer support. The efficacy of the interventions varied with 44% demonstrating some measurement degree of effectiveness.

Type of Evidence: Systematic review [scoping]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests that NPHWW should provide physicians with enhanced wellness programming in areas such as stress reduction strategies, time off/workload reduction, education, and peer support.

Priority Areas: Create and sustain positive work and learning environments and culture; support mental health and reduce stigma; Invest in measurement, assessment, and research

Leape, L. L., Shore, M. F., Dienstag, J. L., Mayer, R. J., Edgman-Levitan, S., Meyer, G. S., & Healy, G. B. (2012). **Perspective: A culture of respect, part 1: the nature and causes of disrespectful behaviour by physicians.** *Academic Medicine*, 87(7), 845. [https://doi.org/ 0.1097/ACM.0b013e318258338d](https://doi.org/0.1097/ACM.0b013e318258338d)

Summary: This perspective piece identified a range of disrespectful conduct observed in healthcare settings, its impacts, and its origins to illustrate its negative impacts on patients and health workers and argue for a culture shift. Disrespect in healthcare was organized into six categories: disruptive behaviour; humiliating, demeaning treatment of nurses, residents, and students; passive-aggressive behaviour; passive disrespect; dismissive treatment of patients; and systemic disrespect. Outcomes included threats to patient safety, inhibiting cooperation, cutting off communication, undermining morale, and inhibiting compliance with new practices. Disrespect was rooted in individual characteristics but also learned, tolerated, and reinforced by hospital culture. The authors concluded that disrespect is a problem in healthcare culture and recommended addressing it in education and professional settings.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Nurses; Physicians

Relevance: This paper suggests the NPHWW should address the culture of disrespect in healthcare settings to support greater patient safety and job satisfaction for healthcare workers who, in cultures of disrespect, are more likely to leave their profession.

Priority Areas: Create and sustain positive work and learning environments and culture

Li, A., Golrokhian-Sani, A-A., Morcos, M. & Morcos, M. (2024). **Analysis of Canadian physician obituaries between 2000 and 2023 to investigate trends in death between specialties: A retrospective cross-sectional study.** *Lifestyle Medicine*, 5, e114. <https://doi.org/10.1002/lim2.114>

Summary: This article offers insights into physician wellbeing by examining mortality trends across medical specialties in Canada. It reveals that the median age of death among physicians has gradually increased to 80 years between 1999 and 2023. However, specialties such as psychiatry and emergency medicine are associated with significantly lower median ages of death – emergency medicine being the lowest at 59 years – suggesting higher stress and potentially poorer work-life balance in these fields. In contrast, specialties like surgery, internal medicine, and public health correlate with longer lifespans, possibly reflecting more stable work environments. These findings underscore the need for targeted wellbeing strategies that consider specialty-specific stressors and support systems.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests that the NPHWW should consider specialty-specific stressors for physicians and develop tailored strategies to support wellbeing.

Priority Areas: Overview of Health Workforce Wellbeing

Li, H., Dance, E., Poonja, Z. & Comers-Gray, I. (2025). **Validity and reliability of an abbreviated Copenhagen Burnout Inventory in Canadian emergency physicians and residents.** *Canadian Journal of Emergency Medicine* :27, 260–26. <https://doi.org/10.1007/s43678-024-00849-3>

Summary: This study addresses the urgent need for efficient burnout assessment among emergency physicians, who face the highest burnout rates in medicine. Researchers validated a ten-item abbreviated version of the Copenhagen Burnout Inventory (CBI) to serve as a short, free tool for monitoring wellbeing in Canadian emergency physicians and trainees. The abbreviated CBI demonstrated strong internal consistency ($\alpha = 0.92$) and high criterion validity, with excellent sensitivity (0.99) and good specificity (0.82) compared to the full version. Although structural validity was mixed, the tool shows promise for practical use in tracking burnout and evaluating interventions aimed at improving health workforce wellbeing, pending further validation with larger samples and additional reliability testing.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests that the NPHWW could consider adopting or further validating the abbreviated Copenhagen Burnout Inventory as a practical, reliable tool for monitoring burnout and supporting wellbeing initiatives among emergency physicians and trainees.

Priority Areas: Invest in measurement, assessment, and research

Lipinski, M., Ahn, E., Cheung, J. W. & Yiu, S. (2025). Evaluating a Canadian tertiary care emergency department physician wellness program. *Canadian Journal of Emergency Medicine* 27, 395-399. <https://doi.org/10.1007/s43678-025-00887-5>

Summary: This five-year evaluation of a physician wellness program in a tertiary care emergency department underscores the critical role of targeted initiatives in supporting health workforce wellbeing. Physicians reported moderate occupational wellness, with collegial support as a key protective factor and emergency department crowding as a major stressor. The program's most valued efforts addressed systemic barriers—such as improving patient complaint processes and recognizing physician contributions—rather than purely social activities. The evaluation framework offers a replicable model for other institutions aiming to enhance clinician wellbeing through structured, responsive wellness programming.

Type of Evidence: Theory-based evaluation study; Peer-reviewed; Canada

Quality: Not appraised; Study provides a transparent description of the evaluation design and results.

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should prioritize initiatives that address systemic stressors in clinical environments, foster peer support, and implement structured wellness programs that are responsive to healthcare workers' feedback and evolving needs.

Priority Areas: Create and sustain positive work and learning environments and culture

Liu, K., Patey, c., Norman, P., Moellekaer, A. B., Lim, R., Alvarez, A. & Heymann, E. P. (2025). Interventions to reduce burnout in emergency medicine: a national inventory of the Canadian experience to support global implementation of wellness initiatives. *Internal Emergency Medicine* 20(12), 1245-1264. <https://doi.org/10.1007/s11739-024-03811-4>

Summary: A Canada-wide review of wellness interventions in Emergency Departments (EDs) highlights the urgent need to address burnout among healthcare workers, particularly in

Emergency Medicine. Thirteen unique initiatives were analyzed, ranging from structured wellness curriculums to informal supports like therapy dogs and Ice Cream Rounds. Notably, all studies involving structured wellness programs showed measurable improvements in burnout and physical health. The findings suggest that targeted, curriculum-based interventions are especially effective in promoting health workforce wellbeing and underscore the importance of global collaboration to develop and refine such programs.

Type of Evidence: Systematic review [narrative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians; Nurses; Allied Health Professionals (undefined)

Relevance: This paper suggests the NPHWW should prioritize initiatives that address systemic stressors in emergency care settings, foster peer and team-based support, and implement structured wellness programs.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value; Invest in measurement, assessment, and research

Liu, R. Q., Davidson, J., Van Hooren, T. A., Van Koughnhett, J. A., Jones, S., Ott, M. C. (2022). Impostorism and anxiety contribute to burnout among resident physicians. *Medical Teacher*, 44(7), 758-764. <https://doi.org/10.1080/0142159X.2022.2028751>

Summary: While many factors contribute to burnout, the impact of impostorism and self-doubt has largely been ignored. Surveying 296 resident doctors across multiple disciplines, the authors investigated the relationship of anxiety and impostorism to the burnout in post-graduate medical learners. The average score on the Clance Impostor Phenomenon Scale (CIPS) was 66.4, corresponding to 'frequent feelings of impostorism'. It was concluded that impostorism is commonly experienced by resident learners independent of speciality and contributed to learners anxiety and burnout. Initiatives to mitigate IP may improve resident learner wellness and decrease burnout in postgraduate learners.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests that NPHWW could survey their membership on the status of impostorism and provide resources/supports to those scoring high on the CIPS.

Priority Areas: Create and sustain positive work and learning environments and culture

Mackay, M.-C., Gilbert, M.-H., Fournier, P.-S., Dextras-Gauthier, J., & Boucher, F. (2022). Management behaviours during the COVID-19 pandemic: The case of healthcare middle managers. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.986980>

Summary: This study aimed to fill the literature gap on organizational practices and leadership skills for a crisis by studying middle managers' behaviours facing the COVID-19 crisis in the healthcare sector. It also showed the relevance of the Viitalla (2005) model for management in a crisis. Focus groups with middle managers from the healthcare community in Quebec during the pandemic were conducted to identify their behaviours, which were then compared with the Viitalla (2005) model of management. Middle managers deployed 21 management activities/behaviours

during the pandemic, all of which aligned with the Viitalla (2005) model of management in a crisis and its competency areas: intrapersonal, social, leadership and supervisory, management, business, and technical. It was concluded that managers need to develop practical skills in various crisis management situations, especially given healthcare settings are already prone to crises without the addition of a pandemic. It was also concluded that the Viitala model is relevant in the context of a crisis since all managerial behaviours corresponded to a competency area.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that Viitala may support the NPHWW in developing effective strategies for intervening in crises through effective management.

Priority Areas: Create and sustain positive work and learning environments and culture

Maragha, T., Atanackovic, J., Adams, T., Brondani, M. & Bourgeuault, I. (2025). Dentists' mental health: challenges, supports, and promising practices. *JDR Clinical & Translational Research*, 100-111. <https://pubmed.ncbi.nlm.nih.gov/39301941/>

Summary: This study highlights significant mental health challenges faced by Canadian dentists, with nearly half reporting issues such as depression, anxiety, and PTSD. Female dentists were disproportionately affected, particularly due to caretaking responsibilities and gendered stressors. Professional struggles varied by role, with practice owners citing staff and management issues, while associates reported lack of autonomy and workplace conflict. Dentists also experienced isolation and emotional strain from patient care. To support workforce wellbeing, the study recommends expanding mental health resources, integrating mental health education into dental training, and fostering inclusive professional engagement—especially for women. These findings underscore the need for targeted, systemic interventions to sustain the dental workforce and improve care outcomes.

Type of Evidence: Analytical cross-sectional [mixed methods]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Dentists

Relevance: This paper suggests the NPHWW should develop targeted, gender-sensitive mental health strategies for dental professionals, expand access to mental health resources, integrate wellness education into dental training, and promote inclusive engagement in professional organizations to address systemic stressors and reduce isolation across diverse practice roles.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>

Summary: This article provided an overview of the literature on burnout and suggested psychiatry could make an important contribution to addressing it by identifying the treatment strategies that are most effective in enabling individuals to return to their work and be successful. The overview of the literature on burnout included the following categories: assessment, engagement, conceptual models, causes and outcomes, burnout in psychiatry, current issues,

burnout and mental illness, single or multiple dimensions, and treatment and prevention. The authors concluded that the research to date on burnout suggests psychiatry is in a strong position to contribute to the growth of knowledge on burnout and provide relevant treatments.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper provides a helpful overview of the burnout literature for the NPHWW to reference. It also suggests that psychiatrists may form an integral part of an effective burnout strategy or intervention.

Priority Areas: Institutionalize and invest in well-being as a long-term value; Support mental health and reduce stigma

Mata, D. A., Ramos, M. A., Bansal, N., Khan, R., Guille, C., Di Angelantonio, E., & Sen, S. (2015). Prevalence of depression and depressive symptoms among resident physicians: A systematic review and meta-analysis. *JAMA*, 314(22), 2373–2383. <https://doi.org/10.1001/jama.2015.15845>

Summary: This paper estimated the prevalence of depression or depressive symptoms among resident physicians. A systematic search of EMBASE, ERIC, MEDLINE, and PsycINFO was completed to identify studies published between January 1963 and September 2015 that provided information on this prevalence. Data were extracted from 31 cross-sectional studies and 23 longitudinal studies. The overall pooled prevalence of depression or depressive symptoms was 28.8%. In a secondary analysis of 7 longitudinal studies, the median absolute increase in depressive symptoms with the onset of residency training was 15.8%. No statistically significant differences were observed between cross-sectional vs longitudinal studies, studies of only interns vs only upper-level residents, or studies of nonsurgical vs both nonsurgical and surgical residents. The authors concluded that depressive symptoms among resident physicians were 28.8%, ranging from 20.9% to 43.2% depending on the instrument used, and increased with calendar year. Further research is needed to identify effective strategies for preventing and treating depression among physicians in training.

Type of Evidence: Systematic review [meta-analysis]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should integrate interventions that address depression among resident physicians and consider the relationship between medical school training and depressive symptoms.

Priority Areas: Invest in measurement, assessment, and research

Mayer, Y., Shalev, M., Nimmon, L., Krupa, T., Bulk, L. Y., Battalova, A., Lee, M., & Jarus, T. (2023). Social support experiences of students and clinicians with disabilities in health professions. *Advances in Health Sciences Education*, 28(2), 477–497. <https://doi.org/10.1007/s10459-022-10169-9>

Summary: This paper sought to explore the trajectories and experiences of social support interactions amongst students and clinicians with disabilities in health professions. In the qualitative longitudinal study, 124 in-depth semi-structured interviews were conducted with 27 health students and 29 health clinicians with disabilities. The paper found the following

characteristics of social support and trajectories in which social support is negotiated: (1) The need to be accepted and not questioned when asking for support, (2) Support interactions that do not heighten otherness, (3) Failure to acknowledge the challenges, (4) Interactions that support the process of disclosure (5) Interactions that allow mobilization of social support without strain or an extra effort. The authors concluded that interactions that provided a sense of inclusion and belonging, interactions that supported the process of disclosure, and interactions that allowed mobilization of social support without an emotional burden contributed to an educational and professionally safer health environment.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW should develop effective educational interventions that enhance inclusion and equity to support healthcare practitioners living with disabilities.

Priority Area: Recruit and retain a diverse and inclusive health workforce

Merry, L., Vissandjée, B., & Verville-Provencher, K. (2021). Challenges, coping responses and supportive interventions for international and migrant students in academic nursing programs in major host countries: A scoping review with a gender lens. *BMC Nursing*, 20(1), 174. <https://doi.org/10.1186/s12912-021-00678-0>

Summary: This study mapped the literature on the challenges, coping responses and supportive interventions for international and migrant students in academic nursing programs in major host countries with a gender lens. The scoping study reviewed ten databases focused on challenges, coping responses, and supportive interventions for international and migrant nursing students in college or university programs in Canada, the United States, Australia, New Zealand, or a European country. 114 publications were included. Several papers suggested that foreign-born nursing students face challenges associated with different cultural roles, norms, and expectations for men and women. Other challenges included perceived discrimination due to wearing a hijab and being a 'foreign-born male nurse,' and in general, nursing was viewed as a feminine, low-status profession. Only two strategies, accessing support from family and other student mothers, used by women to cope with challenges, were identified. Supportive interventions considering gender were limited; these included matching students with support services' personnel by sex and involving male family members in admission and orientation processes. The authors concluded that future work in nursing higher education, especially regarding supportive interventions, needs to address the intersections of gender, gender identity/sexual orientation and foreign-born status and also consider the complexity of migrant students' contexts.

Type of Evidence: Systematic review [scoping]; Peer-reviewed

Quality: Good

Health Workforce Profession: Nurses

Relevance: This paper suggests that the NPHWW should consider and address intersectionality when developing supportive interventions in higher education nursing. However, it also suggests there is limited research to support these considerations.

Priority Areas: Recruit and retain a diverse and inclusive health workforce; Invest in measurement, assessment, and research

Morgan, T. L., McFadden, T., Fortier, M. S., Sweet, S. N. & Tomasone, J. R. (2024). Do physical activity intensity and sedentary behaviour relate to burnout among medical students? Insight from two Canadian medical schools. *Canadian Medical Education Journal*, 15(5).
<https://doi.org/10.36834/cmej.79169>

Summary: This study highlights the importance of physical activity (PA) and sedentary behavior (SB) in supporting medical students' wellbeing, showing that higher levels of light PA and lower levels of SB are significantly associated with reduced burnout. Despite the protective potential of these behaviors, medical students often lack education on PA and SB, which may hinder both their personal health and their ability to promote these behaviors in clinical practice. The findings suggest that integrating movement behavior competencies into medical curricula could simultaneously address student burnout and prepare future health professionals to advocate for healthier lifestyles.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should consider strategies that incorporate physical activity and mitigate sedentary behaviour among medical students to promote wellbeing.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma

Mulherin, K. (n.d.a). *Episode 1: Navigating pharmacy well-being with Katrina Mulherin*. [Audio podcast]. Rx4 Wellness Podcast. <https://pharmacists-2.wistia.com/medias/xvpdvb69vy>

Summary: This podcast episode delves into the various factors within the pharmaceutical profession that influence both engagement and disengagement. It explores the challenges and rewards inherent in the profession, presents findings from preliminary research on the psychological well-being of pharmacists, and discusses strategies and workplace interventions designed to enhance well-being.

Type of Evidence: Narrative [podcast]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Pharmacists

Relevance: This report suggests the NPHWW should develop strategies for supporting greater engagement from pharmaceutical professionals and thereby wellbeing.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Mulherin, K. (n.d.b). *Episode 2: The importance of connection and social support for pharmacy professionals' wellness*. [Audio podcast]. Rx4 Wellness Podcast. <https://pharmacists-2.wistia.com/medias/tai792zdaw>

Summary: This podcast episode explores the significance of connection for pharmacy professionals in fostering well-being. It delves into the nuances of social support within the pharmaceutical field and offers several practical tips and resources for pharmacists to leverage social support to enhance their well-being.

Type of Evidence: Narrative [podcast]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Pharmacists

Relevance: This report suggests the NPHWW should develop strategies for fostering greater connection between patients and pharmacists.

Priority Areas: Create and sustain positive work and learning environments and culture

Murthy Vivek, H. (2022). Confronting health worker burnout and well-being. *New England Journal of Medicine*, 387(7), 577–579. <https://doi.org/10.1056/NEJMp2207252>

Summary: This perspective piece offered strategies for mitigating health worker burnout post-pandemic. The public initially celebrated health workers for their selflessness during the pandemic, but misinformation has since eroded trust and many health workers have received hostility and anger from patients. Burnout was a crisis before the pandemic due to inadequate support, escalating workloads, underinvestment in health infrastructure, and administrative burdens, but the pandemic worsened burnout. The authors recommended the following to address burnout: valuing health workers, lessening administrative burdens, providing mental healthcare, strengthening investment in public health infrastructure, and creating a culture of supporting well-being.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW should integrate valuing health workers, lessening the administrative burdens, providing mental healthcare, strengthening investment in public health infrastructure, and creating a culture of supporting well-being to address health worker burnout.

Priority Areas: Create and sustain positive work and learning environments and culture

National Academies of Medicine (2019). Taking action against clinician burnout: A systems approach to professional well-being. National Academies Press: Washington.

Summary: This report followed up two reports calling for dramatic attention to the issue of patient safety and quality of care by directing attention to the safety, health, and well-being of healthcare clinicians. The report was informed by a consensus study committee that used a systems approach to clinician burnout and professional well-being. The systems framework integrated theories and principles from human factors, systems engineering, job and organizational design, and occupational safety and health. The report concluded that clinician burnout is a major problem and a complex, multi-factorial problem that is not easily solved. Administrative burden, job resources, and individual factors were addressed and related to physicians, nurses, and other clinicians. Insufficient evidence was found to support strong recommendations regarding interventions. The report recommended a systems approach to reducing clinician burnout and fostering professional well-being, given that burnout arises from decisions and actions taken at various levels in healthcare. Specifically, it recommended tackling burnout early in professional development, involving stakeholders in the external environment in solutions, improving health information technology, and reducing the stigma for clinicians seeking help.

Type of Evidence: Policy [recommendations]; Grey literature

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This report suggests that the NPHWW should take a systems approach to mitigating physician burnout, given the complexity of the issue.

Priority Areas: Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

National Academies of Medicine. (2024a). *National plan for health workforce well-being*. Dzau, V. J., Kirch, D., Murthy, V., & Nasca, T. (Eds.). National Academies Press: Washington D.C.

Summary: This US National Plan aimed to inspire collective action across health systems to improve the well-being of the health workforce—an evidence-based approach drawing on literature and stakeholder expertise. The Plan focused on seven **Priority Areas**, six of which are the same **Priority Areas** identified for this bibliography – the seventh priority area is to address and engage effective technology tools. The Plan concluded that system-wide changes are required to improve health worker well-being and that health systems and training programs must commit to a baseline understanding of burnout and stress in their workforce and track well-being and burnout to see progress over time.

Type of Evidence: Policy [recommendations]; Grey literature

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This Plan has informed the **Priority Areas** of the NPHWW and can continue to serve as a point of reference.

Priority Areas: Invest in measurement, assessment, and research

National Academies of Medicine. (2024b). *Valid and reliable survey instruments to measure burnout, well-being, and other work-related dimensions*. <https://nam.edu/valid-reliable-survey-instruments-measure-burnout-well-work-related-dimensions/>

Summary: This webpage provides a summary of the established tools to measure work-related dimensions of well-being. Information was provided by the Research, Data, and Metrics Working Group of the National Academy of Medicine. The tools included the Maslach Burnout Inventory, Oldenburg Burnout Inventory, Single Item Burnout measure, Copenhagen Burnout Inventory, Stanford Professional Fulfillment Index, Well-Being Index and the Patient Health Questionnaire-9. The authors concluded that each tool had advantages and disadvantages, and some were more appropriate for specific populations or settings.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This provides a valuable reference for the NPHWW in determining which measures to rely on for various interventions and strategies aimed at promoting health worker well-being.

Priority Areas: Invest in measurement, assessment, and research

National Collaborating Centre for Indigenous Health. (2023). *Indigenous cultural safety - an environmental scan of cultural safety initiatives in Canada: Chapter 2 - national-level cultural safety initiatives*. <https://www.nccih.ca/34/Publication.nccih?type=1&pillar=8>

Summary: This report chapter focused on initiatives and resources developed and implemented by the federal government and organizations to improve access to culturally safe health services for Indigenous peoples. Resources from the federal government, Indigenous, professional, and other organizations with a health mandate were gathered. Resources included structural changes for how services were provided to Indigenous Peoples; initiatives focused on reconciliation, health equity, and cultural safety; engagement and partnership activities; new programs and services; national policies and strategies that incorporate elements of cultural safety to address health issues; and efforts to build a culturally competent workforce through the development of professional competencies, standards, and guidelines, among others. National-level cultural safety initiatives were wide-ranging and were conducted at multiple levels, sectors, and disciplines.

Type of Evidence: Policy [environmental scan]; Grey literature; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This report suggests numerous sources for the NPHWW to consult in developing culturally safe initiatives for Indigenous Peoples in Canada.

Priority Areas: Recruit and retain a diverse and inclusive health workforce

Negura, L., & Lévesque, M. (2022). Understanding professional distress through social representations: Investigating the shared experience of healthcare social workers in Canada. *International social work*, 65(6), 1184-1200.

Summary: This study examined professional distress experienced by social workers in three Canadian provinces. Thirty interviews revealed that work–life imbalances, unrealistic expectations, exposure to violence, a lack of recognition of their expertise and experience, and negative workplace experiences increase the subjective experience of stress. The authors recommend providing more recognition and awareness about the role of social workers and a better work life balance.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Social Workers

Relevance: This article investigates the causes of professional distress in social workers, which is a necessary start to creating and sustaining positive work environments.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Neufeld, A., Malin, G., Babenko, O. & Orsini, C. (2025). Examining resident burnout through the lens of self-determination theory: The role of general causality orientations. *Journal of Graduate Medical Education*, 224-228. <http://dx.doi.org/10.4300/JGME-D-24-00481.1>

Summary: This article highlights the critical role of self-determination theory in understanding and addressing burnout among medical residents, a key concern for health workforce wellbeing. By analyzing the relationship between general causality orientations, including autonomy, control, and impersonal factors, and burnout, the study found that residents with an autonomy orientation experienced significantly lower burnout, while those with control and impersonal orientations were

more prone to it. These findings suggest that fostering autonomy-supportive environments in graduate medical education could be a powerful strategy for improving motivation, resilience, and overall wellbeing among future healthcare professionals.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests the NPHWW should consider tailored psychological interventions for addressing paramedic workforce wellbeing.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Office of Regulatory Affairs and Service Effectiveness. (2024). *Patients before paperwork*. Government of Nova Scotia. <https://beta.novascotia.ca/documents/reducing-red-tape-physicians-progress-report-may-2024>

Summary: This report aimed to tackle the issue of physicians spending almost 500,000 hours per year on 'red tape' activities. Changes included letting healthcare professionals work to their full potential, making forms make sense, embracing technology, improving legislation & bylaws, and updating processes. The authors concluded that other health professionals can alleviate pressures on physicians by taking on aspects of their administrative work; forms can be streamlined to reduce overall time spent on paperwork; embracing technology can improve healthcare systems; improving legislating and bylaws can change how doctors spend their time; and small process changes can have significant returns.

Type of Evidence: Policy [government report]; Grey literature; Canada

Quality: Moderate; The evidence gathering and methods informing recommendations are not clearly stated.

Health Workforce Profession: Physicians

Relevance: This report provides helpful examples of initiatives that give time back to physicians and suggests the NPHWW should develop strategies that minimize 'red tape' to prevent work overload and burnout.

Priority Areas: Engage effective resources to minimize administrative burden

Office of the United States Surgeon General. (2022). *Addressing health worker burnout: The U.S. Surgeon General's advisory on building a thriving health workforce*. U.S. Department of Health and Human Services. <https://www.hhs.gov/sites/default/files/health-worker-wellbeing-advisory.pdf>

Summary: This advisory contained steps that different stakeholders could take to address health worker burnout. The advisory identified actions for organizations, governments, health insurers, technology companies, academic and training institutions, family members and friends, and health workers. The authors concluded that although many of the recommendations in the Advisory require significant structural change and sustained investment, they require continued attention and action.

Type of Evidence: Policy [advisory]; Grey literature

Quality: Moderate; The evidence gathering and methods informing recommendations not clearly stated.

Health Workforce Profession: All Health Professions

Relevance: This suggests the NPHWW should consider adapting the actions identified in the advisory – for various actors in the health system – to mitigate health worker burnout.

Priority Areas: Support mental health and reduce stigma; Engage effective resources to minimize administrative burden

Olson, K. D. (2017). Physician burnout: A leading indicator of health system performance? *Mayo Clinic Proceedings*, 92(11), 1608–1611. <https://doi.org/10.1016/j.mayocp.2017.09.008>

Summary: This editorial proposed that burnout may be the best early indicator of health system dysfunction, and decision-makers should mitigate it before it affects patient care. It was argued that burnout stems from the workplace environment, is strongly related to physicians' plans to leave their practice, and may be expressed through psychological withdrawal from work (as opposed to leaving work). The author recommended monitoring burnout and proactively securing the well-being of the workforce by providing regular, individual check-ins and minimizing stigma around seeking help.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests that the NPHW should focus on burnout prevention strategies, such as providing regular, individual check-ins with healthcare workers.

Priority Areas: Invest in measurement, assessment, and research

OurCare. (2023). *National survey findings: Summary report*. MAP Centre for Urban Health Solutions and St. Michaels Unity Health Toronto.

Summary: This report shares the results of the OurCare national survey regarding primary healthcare in Canada to illustrate the proportion of adults without access. The survey was administered to 9,000 participants across Canada in 2022. 6.5 million Canadians did not have a family physician or nurse practitioner they could see regularly for care, which was worsened by the pandemic. Proportionally, more lacked access in BC, Quebec, and Atlantic provinces, and racialized, lower income and poorer health groups were less likely to have a primary provider. The report concluded that provincial governments need to wisely use federal money to address the crisis in access and ensure everyone who wants a family doctor or nurse practitioner can have one without paying for private care. The interactive survey results can be viewed at <https://data.ourcare.ca/all-questions>.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physician; Nurse Practitioners

Relevance: This article provides context for the NPHWW's importance in introducing measures that attract and retain more primary care providers, which may improve the public's access to primary care.

Priority Areas: Invest in measurement, assessment, and research

OurCare. (2024). *Primary care needs OurCare: The final report of the largest pan-Canadian conversation about primary care*. MAP Centre for Urban Health Solutions and St. Michaels Unity Health Toronto.

https://maphealth.ca/wp-content/uploads/Primary-Care-Needs-OurCare_The-final-report-of-the-largest-pan-Canadian-conversation-about-primary-care.pdf

Summary: This report presented key findings from conversations with people in Canada about the future of primary care and introduced the OurCare standard—six elements of the healthcare system everyone should expect from their primary care. The report was informed by a national survey, provincial priorities panels, and community roundtables. The following themes were identified for improving primary care: address the attachment crisis where 22% of adults in Canada do not have a family doctor or nurse practitioner; enable patient access to health records; improve accountability in the healthcare system; expand virtual care; expand team-based primary care; expand primary care coverage; bring a strong equity focus; and grow the primary care workforce. The authors recommended adopting the OurCare standards: ensuring everyone has a primary care clinician; receives ongoing care in a timely way; is connected to community and social services to support well-being; can access their health records online and share them with other clinicians; receives culturally safe care; are interacting with services that are accountable to the community.

Type of Evidence: Policy [standards]; Grey literature; Canada

Quality: Good

Health Workforce Profession: Physicians; Nurse Practitioners

Relevance: This report suggests that the NPHWW should consider ways to address and adapt the OurCare standard to physician and healthcare worker interventions and strategies to ensure people in Canada receive the care they need.

Priority Areas: Engage effective resources to minimize administrative burden

Purchase, M., Thériault, É. R., & Collicutt, B. (2024). Ageism Healthcare: Implications for the Psychological Well-Being of Atlantic Canadian Healthcare Professionals. *Journal of applied gerontology: the official journal of the Southern Gerontological Society*, 43(9), 1355–1365.

<https://doi.org/10.1177/07334648241237099>

Summary: This article highlights the impact of ageism on the psychological wellbeing of healthcare professionals in Atlantic Canada, revealing that negative expectations about aging are significantly linked to higher levels of burnout, stress, and emotional dissonance, and lower overall wellbeing. Emotional dissonance was found to partially mediate the relationship between stress and both burnout and wellbeing, suggesting a complex interplay of attitudes and emotional strain. The findings underscore the importance of addressing ageist beliefs within healthcare settings through targeted education and interventions, as a means to support the mental health and resilience of the health workforce.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This report suggests the NPHWW should develop strategies to address ageism in healthcare settings to mitigate burnout, stress, and emotional dissonance.

Priority Areas: Create and sustain positive work and learning environments and culture; Recruit and retain a diverse and inclusive health workforce

Puyat, J. H., Pott, K., Leclerc, A., Song, A., Na Choi, Y., Chan, K., Bernard, C. & Rodney, P. (2024). Online modules to alleviate burnout and related symptoms among interdisciplinary staff in long-term care: A pre-post feasibility study. *American Journal of Hospice* 41(3), 329-339.
<https://journals.sagepub.com/doi/10.1177/10499091231174448>

Summary: This article explores a promising approach to improving health workforce wellbeing in long-term care settings by evaluating the feasibility of online modules designed to reduce burnout among clinical staff. Conducted across five sites in Vancouver, the study found high completion and satisfaction rates, with most participants reporting the modules as useful, engaging, and easy to understand. Notably, participants experienced modest reductions in burnout and secondary traumatic stress, though compassion satisfaction remained unchanged. These findings suggest that such interventions are both practical and potentially beneficial, highlighting the need for further research to assess their long-term effectiveness in supporting care staff wellbeing.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; The study is underpowered with only 64 participants, used the ProQOL measure which only partially aligns with its aims, and its unclear why compassion satisfaction and secondary traumatic stress were analysed given the focus on burnout.

Health Workforce Profession: All Health Professions

Relevance: This report suggests the NPHWW should consider adapting the online modules, or similar strategies, to address burnout and related symptoms in the health workforce.

Priority Areas: Institutionalize and Invest in Well-Being as a Long-Term Value

Razzetti, G. (2019, August 7). Why good enough is better than perfect: The simple psychological shift to free you from perfectionism. *Medium*. <https://medium.com/personal-growth/good-enough-is-the-new-perfect-a0147ddd6d58>

Summary: This perspective piece argues that perfectionism is not a standard but a way of living and has mostly detrimental effects. The article found two distinct sub-dimensions of perfectionism: excellence-seeking perfectionism and failure-avoiding perfectionism – both of which hamper success and often lead to depression, anxiety, and life paralysis. The author recommended striving for ‘good enough,’ being curious, not judgmental, remaining flexible, and setting time limits to overcome fear and procrastination associated with perfectionism.

Type of Evidence: Expert opinion; Grey literature

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This article suggests the NPHWW may benefit from addressing perfectionism among healthcare workers to support well-being.

Priority Areas: Create and sustain positive work and learning environments and culture

Rolfesen, G. D. (2016, May 2). How to start changing an unhealthy work environment. TEDx Talks.
<https://www.youtube.com/watch?v=eYLB7WUtYt8>.

Summary: This TED talk was about addressing unhealthy workplace environments (e.g., environments that encourage ‘backbiting’ or gossip). The speaker proposed a model for eliminating backbiting: 1) gather all employees 2) ask them if they believe backbiting takes place in the workplace 3) have them define backbiting 4) ask them if they would like to eliminate

backbiting 4) invite them to join a 6-month project to eliminate backbiting and sign a document to that effect 5) display the signed copy of the commitment in the workplace 6) gather employees every month to evaluate progress. The speaker concluded that eliminating backbiting in the workplace is a simple process that yields benefits like greater work satisfaction and decreased absenteeism.

Type of Evidence: Expert opinion; Grey literature [Video]

Quality: Poor: The perspective is based exclusively on personal experience and is not supported by literature.

Health Workforce Profession: All Health Professions

Relevance: This talk suggests the NPHWW should consider integrating the backbiting-elimination process into its workplace interventions to improve practitioners' well-being and career satisfaction.

Priority Areas: Create and sustain positive work and learning environments and culture

Rotenstein, L. S., Brown, R., Sinsky, C., & Linzer, M. (2023). The association of work overload with burnout and intent to leave the job across the healthcare workforce during COVID-19. *Journal of General Internal Medicine*, 38(8), 1920–1927. <https://doi.org/10.1007/s11606-023-08153-z>

Summary: This paper characterized the association of work overload with rates of burnout and intent to leave (ITL) the job in a large national sample of healthcare workers. Data was collected through a cross-sectional survey study conducted between April and December 2020. The overall burnout rate was 49.9%. Intention to leave was reported by 28.7%, with nurses most likely to report it, followed by non-clinical staff, other clinical staff, and finally, physicians. The prevalence of perceived work overload ranged from 37.1% to 47.4%, and work overload was significantly associated with burnout and intent to leave across roles. The authors concluded that there are high rates of burnout and intent to leave the job across healthcare roles. They recommended proactively addressing work overload and matching work demands to capacity for all healthcare workers.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Moderate; The study has a high degree of sample variability and an inability to control for some confounding factors (mainly role type), which required assumptions to be made.

Health Workforce Profession: Nurses; Physicians

Relevance: This suggests the NPHWW should address workload in intervention and prevention strategies to mitigate burnout and intent to leave.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Rubin, B., Goldfarb, R., Satele, D., Graham, L. (2021). Burnout and distress among allied health care professionals in a cardiovascular centre of a quaternary hospital network: a cross-sectional study. *Canadian Medical Association Journal*, 9(1). <https://doi.org/10.9778/cmajo.20200059>

Summary: Burnout and distress negatively affect the well-being of health care professionals and the treatment they provide. The authors sought to measure the prevalence of burnout and distress among allied health care staff at a centre in Toronto using a survey of allied health care staff including physicians, occupational therapists, pharmacists, social workers, dieticians, and speed language pathologists. The response rate was 86% and the majority of respondents

reported experiencing burnout in the previous month, and over half reported emotional problems. It was concluded that the prevalence of burnout, emotional problems and distress were high among allied health care staff, and that fair treatment in the workplace and adequate staffing may lower distress levels and improve the work experience.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; Small sample size (n=45) limits validity, and the use of univariate analyses limits understanding of variable relationships.

Health Workforce Profession: Physiotherapists; Respiratory Therapists; Occupational Therapists; Pharmacists; Social Workers; Speech-language Pathologists

Relevance: This report suggests the NPHWW could advocate for fairer treatment and adequate staffing of allied health professionals in the workplace.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Schreiber, M., Ahmad, T., Scott, M., Imrie, K., & Razack, S. (2021). The case for a Canadian standard for 2SLGBTQIA+ medical education. *Canadian Medical Association Journal*. 193(16), E562–E565.
<https://doi.org/10.1503/cmaj.202642>

Summary: This perspective paper considered the promise and challenges of integrating 2SLGBTQIA+ content into medical education across Canadian medical schools. It argued for the creation of a national standard for 2SLGBTQIA+ health care education and physician competency objectives in Canada. 2SLGBTQIA+ Canadians experienced disproportionately poor health outcomes. Intersecting oppressive systems, such as white supremacy and colonialism, created worsened health outcomes for 2SLGBTQIA+ people who are Black or, Indigenous or both. Healthcare providers received inadequate training in 2SLGBTQIA+ care, contributing to suboptimal experiences for 2SLGBTQIA+ patients. Integrating 2SLGBTQIA+ content into medical curricula had inherent challenges but has been shown to be an effective step to improving competence. The authors concluded that a national standardization mandating the inclusion of 2SLGBTQIA+ curricula within undergraduate and postgraduate medical education would better support community health care.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should consider developing 2SLGBTQIA+ content for medical curricula to improve competence and healthcare delivery and improve the experiences of 2SLGBTQIA+ healthcare workers.

Priority Areas: Recruit and retain a diverse and inclusive health workforce; Recruit and retain a diverse and inclusive health workforce

Shanafelt, T. D. (2005). Finding meaning, balance, and personal satisfaction in the practice of oncology. *The Journal of Supportive Oncology*, 3(2), 157–162, 164.
https://people.musc.edu/~elg26/teaching/MCCR2015/Lectures/Lecture26_WorkLife/WLB.Shanfelt3.pdf

Summary: This commentary article proposed three steps to help oncologists identify values, promote balance between their personal and professional lives, enhance the activities they find

most meaningful in their work, and nurture activities that promote personal well-being. The steps identified for helping oncologists promote personal well-being include identifying values and priorities, optimizing meaning in work, and nurturing personal wellness activities. The author recommended that fellowship programs implement the three steps to promote well-being and support existing and future oncologists' well-being.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should integrate the three recommended steps to support oncologists' well-being and prevent burnout.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Shanafelt, T. D. (2021). Physician well-being 2.0: Where are we and where are we going? *Mayo Clinic Proceedings*, 96(10), 2682–2693. <https://doi.org/10.1016/j.mayocp.2021.06.005>

Summary: This perspective piece summarized the historical journey from the 'era of distress' to the current state (Well-being 1.0) and the early contours of the next phase (Well-being 2.0) to highlight the lessons of 1.0 and urge decision-makers to accelerate the transition to 2.0. The 'era of distress' was characterized by a lack of awareness of well-being, a culture of perfection, deity-like treatment for physicians, rites of passage, and a focus on institutional needs. The well-being 1.0 era was characterized by awareness of well-being, a culture of wellness, physicians with hero-like qualities, and a focus on patient needs. The 2.0 era was characterized by action, a culture of vulnerability, self-expression and compassion, physicians with human qualities, and a focus on the needs of people – both patients and physicians. The authors concluded that the last three decades saw tremendous progress in physician well-being but urged leading institutions to move from awareness of the importance of well-being to action that supports well-being.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should focus on implementing interventions and strategies that align with the well-being 2.0 era of acting, encouraging a culture of vulnerability, self-expression and compassion, promoting the image of physicians as humans rather than heroes, and focusing on the needs of both physicians and patients.

Priority Areas: Create and sustain positive work and learning environments and culture; Engage effective resources to minimize administrative burden; Institutionalize and invest in well-being as a long-term value; Recruit and retain a diverse and inclusive health workforce

Shanafelt, T. D., & Noseworthy, J. H. (2017). Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. *Mayo Clinic Proceedings*, 92(1), 129–146. <https://doi.org/10.1016/j.mayocp.2016.10.004>

Summary: The paper summarized nine organizational strategies to promote physician engagement and described how they were operationalized at Mayo Clinic to demonstrate that effective efforts to reduce burnout and promote engagement can make a difference. Strategies

included acknowledging and assessing the problem, harnessing the power of leadership, developing and implementing targeted interventions, cultivating community at work, using rewards and incentives wisely, aligning values and strengthening culture, promoting flexibility and work-life integration, providing resources to promote resilience and self-care, and facilitating and funding organizational science. The authors concluded that physician burnout is a shared responsibility of physicians and organizations and that organizational efforts to mitigate burnout make a difference. Furthermore, they concluded that effective interventions are not expensive.

Type of Evidence: Qualitative; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should integrate organizational-level interventions and strategies for physician engagement to mitigate burnout. It also suggests that cost-effective interventions can make a difference.

Priority Areas: Support mental health and reduce stigma; Institutionalize and invest in well-being as a long-term value

Shanafelt, T. D., Gorringer, G., Menaker, R., Storz, K. A., Reeves, D., Buskirk, S. J., Sloan, J. A., & Swensen, S. J. (2015). Impact of organizational leadership on physician burnout and satisfaction. *Mayo Clinic Proceedings*, 90(4), 432–440. <https://doi.org/10.1016/j.mayocp.2015.01.012>

Summary: This article evaluated the impact of organizational leadership on the professional satisfaction and burnout of individual physicians working for a large healthcare organization. Surveyed physicians and scientists working for a large healthcare organization in October 2013 on their immediate supervisors in 12 dimensions of leadership and assessed burnout. A total of 2813 (72.2%) responded. Supervisor scores in each of the 12 leadership dimensions and composite leadership scores strongly correlated with burnout and satisfaction. On multivariate analysis adjusting for age, sex, duration of employment at Mayo Clinic, and specialty, each 1-point increase in composite leadership score was associated with a 3.3% decrease in the likelihood of burnout and a 9.0% increase in the likelihood of satisfaction with the physicians supervised. The mean composite leadership rating of each division/department chair also correlated with the prevalence of burnout and satisfaction at the division/department level. The authors concluded that the leadership qualities of physician supervisors impacted the well-being and satisfaction of individual physicians working in healthcare organizations.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should consider selecting and training physician supervisors to develop burnout intervention and prevention strategies and promote physician well-being.

Priority Areas: Institutionalize and invest in well-being as a long-term value

Shanafelt, T. D., Larson, D., Bohman, B., Roberts, R., Trockel, M., Weinlander, E., Springer, J., Wang, H., Stolz, S., & Murphy, D. (2023). Organization-wide approaches to foster effective unit-level efforts to

improve clinician well-being. *Mayo Clinic Proceedings*, 98(1), 163–180.
<https://doi.org/10.1016/j.mayocp.2022.10.031>

Summary: This perspective paper outlined 7 steps for organizations to consider as they establish the infrastructure to improve professional well-being and provided a description of application and evidence of efficacy from a large academic medical center. The 7 steps identified included establishing a common organizational framework for action, appointing and supporting a unit well-being leader, assessing the experience and unique needs of each unit with benchmarks, integrating unit-level improvement efforts, creating a consistent structure for interventions, fostering progress by assessing process metrics, and considering the unit lens when assessing organizational progress on metrics. The authors concluded that the 7-step process enabled organizations – that were already committed to well-being at the system-wide level – to address variability and the unique needs of units within the system and thus have the greatest ability to address day-to-day issues that drive workers' well-being.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that the NPHWW should consider implementing the 7-step process or investigating unit-level interventions and strategies to promote healthcare workforce well-being.

Priority Areas: Invest in measurement, assessment, and research; Institutionalize and invest in well-being as a long-term value

Shanafelt, T. D., Lightner, D. J., Conley, C. R., Petrou, S. P., Richardson, J. W., Schroeder, P. J., & Brown, W. A. (2017). An organization model to assist individual physicians, scientists, and senior health care administrators with personal and professional needs. *Mayo Clinic Proceedings*, 92(11), 1688–1696.
<https://doi.org/10.1016/j.mayocp.2017.08.020>

Summary: This paper described the 15-year experience of the Mayo Clinic Office of Staff Services (OSS) providing peer support to physicians, scientists, and senior administrators at one center to inform other medical practices considering how to create low-barrier access to help individuals deal with personal and professional challenges. The peer support model was based on mid-senior level individuals providing professional and personal support to their peers on an anonymous and voluntary basis. The key characteristics of the peer-support model included: leadership support (Board of Governors and adequate funding), peer support embedded within financial services (increased awareness and normalized access); availability to address any issue (professional or personal); resource and referral for peer support aspects (e.g., referral to a trusted psychiatrist); operating independently of the disciplinary process; optimally staffing the centre; carefully selecting the membership of the peer support panel (highly respected individuals); regularly supporting the members offering peer support (via a weekly meeting focused on wisdom sharing); and confidentiality for all participants. Individuals who completed peer support checkups filled out an anonymous survey and reported that it was helpful, they were satisfied, and they believed regular visits would be beneficial. The authors concluded that organizations need to provide easily accessible support to those experiencing distress and found peer support to be a useful initiative in this regard.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests the NPHWW may benefit from integrating peer-support initiatives to address physician burnout and reduce stigma around accessing mental health services.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma

Shanafelt, T. D., West, C., Zhao, X., Novotny, P., Kolars, J., Habermann, T., & Sloan, J. (2005). Relationship between increased personal well-being and enhanced empathy among internal medicine residents. *Journal of General Internal Medicine*, 20(7), 559–564. <https://doi.org/10.1111/j.1525-1497.2005.0108.x>

Summary: This paper used a cross-sectional survey to measure resident well-being and explored its relationship with empathy to contribute to the literature on resident distress. Resident empathy was higher for residents with higher mental well-being; however, the difference was statistically significant only for the cognitive sub-scale. The importance of personal wellness promotion strategies differed for students with higher mental well-being. The authors concluded that high mental well-being was associated with enhanced resident empathy, but further research is needed to determine how to promote resident well-being.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Poor; The sampling methodology and size were not appropriate for significance testing, inclusion criteria were not indicated, and the measures of well-being appeared to be arbitrary.

Health Workforce Profession: Physicians

Relevance: This paper supports the notion that the NPHWW should develop strategies to promote well-being as they may enhance empathy and thereby improve patient care.

Priority Areas: Create and sustain positive work and learning environments and culture

Shanafelt, T., Stolz, S., Springer, J., Murphy, D., Bohman, B., & Trockel, M. (2020). A blueprint for organizational strategies to promote the well-being of healthcare professionals. *NEJM Catalyst*, 1(6). <https://doi.org/10.1056/CAT.20.0266>

Summary: This paper proposed a successful well-being strategy blueprint based on four fundamental components that most healthcare organizations can tailor and implement according to their needs. The blueprint's four key components included foundational programs (e.g., well-being assessments), cultural transformation, rapid iterative experimentation, and sustainability. Examples of tactics to accomplish each component were identified. The authors recommended developing an organization-specific strategy based on the provided blueprint and once implemented, determining the specific tactics needed to drive progress.

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This suggests the NPHWW should consider whether organizational-level strategies address all four components of the blueprint to ensure effectiveness.

Priority Area: Invest in measurement, assessment, and research

Type of Evidence: Expert opinion; Peer-reviewed

Shapiro, D. E., Duquette, C., Abbott, L. M., Babineau, T., Pearl, A., & Haidet, P. (2019). Beyond burnout: A physician wellness hierarchy designed to prioritize interventions at the systems level. *American Journal of Medicine*, 132(5), 556–563. <https://doi.org/10.1016/j.amjmed.2018.11.028>

Summary: This paper introduced a model for addressing physician burnout that integrates several variables into an easy-to-understand hierarchy. The model was modified from Maslow's hierarchy to direct leaders to address physicians' physical and mental health needs first; patient and physician physical safety second; respect from leadership, colleagues, patients, and others third; appreciation and connection fourth; and healing patients and contributing to the fullest of one's ability fifth. The authors recommended that institutions employ this hierarchy to create 'burnout profiles' of personnel by collecting data through focus groups and qualitative assessments, for example, and then intervening at the lowest tier of the hierarchy first. They also recommended refining the structure, evaluating strategies, and testing the impact.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should consider physician burnout through the models' lens and develop interventions for each tier to, ultimately, institutionalize physician well-being.

Priority Areas: Create and sustain positive work and learning environments and culture; Support mental health and reduce stigma; Engage effective resources to minimize administrative burden

Sheekha, T. A., Rohatinsky, N., Alhassan, J. K. A., Kendel, D., Levandoski, C., Dmytrowich, J., Lafontaine, T., Cardinal, M. & Peña-Sánchez, J. N. (2024). Health care providers' well-being indicators are associated with their intention to leave their positions: A cross-sectional study from Saskatchewan, Canada. *Original Research*, 61(1), 1-11. <https://doi.org/10.1177/00469580241306548>

Summary: This study explores the intention to leave and well-being indicators among health care providers (HCPs) in Saskatchewan, Canada, including registered nurses, physicians, and respiratory therapists. Conducted between December 2021 and April 2022, the survey found that 38.6% of participants considered leaving their positions. Higher job satisfaction significantly reduced this likelihood, while high moral distress and burnout increased it. Registered nurses were more likely than physicians to consider leaving, and gender and family dynamics influenced how burnout and age affected turnover intentions. These findings highlight the importance of addressing moral distress, burnout, and redeployment in retention strategies, emphasizing the need for tailored approaches to support health workforce wellbeing.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurses; Physicians; Respiratory Therapists

Relevance: This report suggests the NPHWW should address the distinct effects of age, gender, and children at home on HCP wellbeing to develop targeted strategies to improve retention.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Siad, F. M., & Rabi, D. M. (2021). Harassment in the field of medicine: cultural barriers to psychological safety. *CJC Open*, 3(12), S174–S179. <https://doi.org/10.1016/j.cjco.2021.08.018>

Summary: This article presented the cultural determinants of harassment in medical organizations and advocated for programs and policies that support equity, diversity, and inclusion but also for leadership models that support inclusive transformation to create a culture of safety. The article determined that large power gradients, the presence of enabling organizational structures (specifically, ineffective regulation of professionalism), and weak ethical climates contributed to psychologically unsafe cultures in the field of medicine. They also suggested that creating psychologically safe environments hinged on limiting opportunities for harassment to occur by creating inclusive, safe, equitable, and supportive environments. The authors concluded that a cultural of psychological safety in the medical field was critically important for workers and patients to thrive.

Type of Evidence: Expert opinion; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This suggests the NPHWW should address psychologically unsafe cultures in medical organizations by introducing interventions focused on inclusivity, safety, equitability, and supportive environments.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value; Recruit and retain a diverse and inclusive health workforce

Singh, J., Poon, D. E.-O., Alvarez, E., Anderson, L., Verschoor, C. P., Sutton, A., Zendo, Z., Piggott, T., Apatu, E., Churipuy, D., Culbert, I., & Hopkins, J. P. (2024). Burnout among public health workers in Canada: A cross-sectional study. *BMC Public Health*, 24, 48. <https://doi.org/10.1186/s12889-023-17572-w>

Summary: This article reveals an alarming prevalence of burnout – nearly 79% – among Canadian public health workers three years into the COVID-19 pandemic, underscoring a major threat to health workforce wellbeing. The study identifies key work-related contributors to burnout, including redeployment to pandemic response, workplace harassment, lack of safety and support, and longer work experience. These factors not only heightened emotional exhaustion but also increased the likelihood of workers intending to leave or retire early. The findings emphasize the urgent need for public health organizations to implement targeted interventions that address workplace stressors, foster recovery, and support long-term workforce sustainability.

Type of Evidence: Descriptive cross-sectional; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Nurses; Physicians; Allied Health Professionals (public health inspectors, epidemiologists and other technical public health professionals)

Relevance: This report suggests the NPHWW should implement targeted strategies to reduce burnout by enhancing workplace safety, providing robust support systems, addressing harassment, and developing retention plans that prioritize the wellbeing and sustainability of the public health workforce.

Priority Areas: Create and sustain positive work and learning environments and culture

Sinsky Christine A. & Panzer Jeffrey. (2022). The solution shop and the production line: The case for a frameshift for physician practices. *New England Journal of Medicine*, 386(26), 2452–2453. <https://doi.org/10.1056/NEJMp2202511>

Summary: This piece argued for refocusing physician practices on what they were trained to do, which would support greater career satisfaction and positive patient experiences. The authors identified two streams of work physicians engage with solution shops and production lines. The first described solving unstructured problems and building relationships with patients; the second described process-oriented activities like screening, prescribing medication, etc.). The paper argued that physicians spend too much time on the production line when other roles, such as registered nurses, medical assistants, and virtual systems, could take over. To ensure physicians spend more time in the solution shop, the authors recommended distributing production line work to registered nurses, medical assistants, and virtual systems. However, they emphasized that this work should remain within the same team and physical space, be strategically designed to match the skills of the worker to work and be supported by institutional and regulatory policies, workflows, staffing models, and technology.

Type of Evidence: Expert opinion; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should develop strategic production line work interventions to utilize the skills of other healthcare workers within a health team, offer physicians solution shop work, and ultimately boost efficiency.

Relevance: Engage effective resources to minimize administrative burden

Sokol-Hessner, L., Folcarelli, P. H., Annas, C. L., Brown, S. M., Fernandez, L., Roche, S. D., Sarnoff Lee, B., Sands, K. E., Atlas, T., Benoit, D. D., Burke, G. F., Butler, T. P., Federico, F., Gandhi, T., Geller, G., Hickson, G. B., Hoying, C., Lee, T. H., Reynolds, M. E., ... Turner, K. (2018). A road map for advancing the practice of respect in health care: the results of an interdisciplinary modified Delphi consensus study. *The Joint Commission Journal on Quality and Patient Safety*, 44(8), 463–476. <https://doi.org/10.1016/j.jcjq.2018.02.003>

Summary: This paper argued that organizations should strive to eliminate disrespect to patients, families, and healthcare professionals to reduce the nonphysical harm it imparts. The Delphi process yielded six high-level recommendations: “Leaders must champion a culture of respect and dignity”; with other professionals sharing the responsibility to “Promote accountability”; “Engage and support the health care workforce”; “Partner with patients and families”; “Establish systems to learn about and improve the practice of respect”; and “Expand the research agenda and measurement tools and disseminate what is learned.” The authors concluded that disrespect is a preventable harm, and organizations and professionals should refer to the high-level recommendations to develop a reliable practice of respect.

Type of Evidence: Policy [recommendations based on consensus]; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests the NPHWW should integrate interventions focused on eliminating disrespect in accordance with the high-level recommendations provided it provided.

Priority Areas: Create and sustain positive work and learning environments and culture

Statistics Canada (2022, June 3). Experiences of healthcare workers during the COVID-19 pandemic, September to November 2021. *The Daily*. <https://www150.statcan.gc.ca/n1/daily-quotidien/220603/dq220603a-eng.htm>

Summary: This StatsCan output looked at the impact of the COVID-19 pandemic on healthcare workers as it related to their mental health, personal life and work environment, and reasons for leaving or considering leaving their jobs. Most healthcare workers (95.0%) reported that the pandemic impacted their jobs, and a large majority (86.5%) felt more stressed at work during the pandemic. Differences were observed between the type of healthcare worker, gender, and level of experience. Nurses were most likely to want to leave, or leave, their jobs in the next three months. Healthcare workers experienced many challenges during the pandemic and may continue to be impacted for some time due to wait lists and backlogs in healthcare services caused by missed appointments, delayed surgeries, and other interventions.

Type of Evidence: Descriptive cross-sectional; Grey literature; Canada

Quality: Moderate; The study notes a high degree of sampling variability and suggests that the findings may not be generalizable to the wider population.

Health Workforce Profession: All Health Professions

Relevance: This data suggests the NPHWW is timely in addressing burnout and well-being in the healthcare workforce post-pandemic and should be sensitive to professional, gender- and experience-based differences in healthcare workers.

Priority Areas: Invest in measurement, assessment, and research

Strauss, C., Lever Taylor, B., Gu, J., Kuyken, W., Baer, R., Jones, F., & Cavanagh, K. (2016). What is compassion, and how can we measure it? A review of definitions and measures. *Clinical Psychology Review*, 47, 15–27. <https://doi.org/10.1016/j.cpr.2016.05.004>

Summary: This paper proposed a definition of compassion and offered a systematic review of self- and observer-rated measures. The literature review consolidated existing definitions of compassion. It scanned the Web of Science, PsycInfo, and Meline from inception to 2015. The authors determined that compassion consisted of five elements: recognizing suffering, understanding the universality of human suffering, feeling for the person suffering, tolerating uncomfortable feelings, and motivation to act/acting to alleviate suffering. The authors concluded that the measures of compassion could be improved and that a new measure is needed.

Type of Evidence: Systematic review; Peer-reviewed

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that the NPHWW should address all five elements of compassion when developing interventions and strategies to measure and/or increase compassion in healthcare systems to ensure their effectiveness. However, the issues of well-being and burnout are not examined in this study.

Priority Areas: Invest in measurement, assessment, and research

Tajirian, T., Lo, B., Strudwick, G., Tasca, A., Kendell, E., Poynter, B., Kumar, S., Chang, P.-Y., Kung, C., Schachter, D., Zai, G., Kiang, M., & Hoppe, T. (2025). Assessing the impact on electronic health record burden after five years of physician engagement in a Canadian mental health organization: Mixed-methods study. *JMIR Human Factors*, 12. <https://doi.org/10.2196/65656>

Summary: This article underscores the significant impact of electronic health record (EHR) systems on physician wellbeing, particularly in the context of burnout within a Canadian mental health organization. Despite some positive perceptions, such as improved communication and increased EHR proficiency following a physician engagement strategy, a 26% of surveyed physicians met burnout criteria, with 61% of those linking it directly to EHR use. The engagement strategy showed promise in mitigating EHR-related stress, yet persistent challenges in usability and infrastructure highlight the need for continued system-level improvements. Overall, the study emphasizes that enhancing health workforce wellbeing requires not only supportive engagement initiatives but also broader reforms to optimize EHR functionality and reduce administrative burden.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed; Canada

Quality: Moderate; Focuses on physician burnout related to EHR usage but fails to regress burnout onto EHR metrics, relying instead on descriptive percentages that don't reveal the strength or direction of relationships or account for confounding variables.

Health Workforce Profession: Physicians

Relevance: This article suggests the NPHWW should prioritize system-level improvements to electronic health records and implement structured physician engagement strategies to reduce burnout and enhance overall workforce wellbeing.

Priority Areas: Engage effective resources to minimize administrative burden

Thiessen, K., Benoit, C., Atanackovic, J., Neiterman, E., Gregory, K., Akuamoah-Boateng, H., Freeman, A., Mellor, A. & Bourgeault, I. (2024). *Canadian Journal of Midwifery Research and Practice*, 23(1). <https://doi.org/10.22374/cjmrp.v23i1.28>

Summary: This study reveals that a high percentage of Canadian midwives and midwifery students experience mental health challenges, yet face substantial barriers to taking leave, often resulting in changes to their work rather than formal time off. These findings highlight limitations in current midwifery practice models and underscore the need for more flexible, supportive systems to protect health workforce wellbeing and reduce attrition.

Type of Evidence: Analytical cross-sectional [mixed methods]; Peer-reviewed; Canada

Quality: Moderate; Article lacks a consistent statement of purpose, making the central research aim unclear. Although both qualitative and quantitative methods were used, their integration was not well explained. The quantitative analysis was limited to basic frequency counts, offering little depth.

Health Workforce Profession: Midwives

Relevance: This article suggests the NPHWW should advocate for more flexible and supportive practice models in healthcare, particularly midwifery, to reduce barriers to mental health leave and promote sustainable wellbeing and retention in the health workforce.

Priority Areas: Institutionalize and Invest in Well-Being as a Long-Term Value; Overview of health workforce wellbeing

Thomas Craig, K. J., Willis, V. C., Gruen, D., Rhee, K., & Jackson, G. P. (2021). The burden of the digital environment: A systematic review on organization-directed workplace interventions to mitigate physician burnout. *Journal of the American Medical Informatics Association*, 28(5), 985–997. <https://doi.org/10.1093/jamia/ocaa301>

Summary: This systematic review identified workplace interventions that mitigate physician burnout related to the digital environment, including health information technologies with or without the application of advanced analytics for clinical care. Eighty-one articles met the inclusion criteria. Thirty-eight studies reported interventions to decrease the digital tool burden. Sixty-eight percent of the studies reported improved burnout and/or its proxy measures. Burnout was decreased by interventions that optimized technologies (primarily electronic health records), provided training, reduced documentation and task time, expanded the care team, and leveraged quality improvement processes in workflows. The authors concluded that physician burnout was not reduced by technology implementation but could be mitigated by technology and workflow optimization, training, team expansion, and careful consideration of factors affecting burnout, including specialty, practice setting, regulatory pressures, and how physicians spend their time.

Type of Evidence: Systematic review [narrative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW should be mindful of the limits of technology-based interventions in improving burnout and focus on developing technological interventions and strategies to optimize workflow, training, team expansion and high-level analyses of factors affecting burnout.

Priority Areas: Engage effective resources to minimize administrative burden; Institutionalize and invest in well-being as a long-term value

Thomas, M. R., Dyrbye, L. N., Huntington, J. L., Lawson, K. L., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2007). How do distress and well-being relate to medical student empathy? A multicenter study. *Journal of General Internal Medicine*, 22(2), 177–183. <https://doi.org/10.1007/s11606-006-0039-6>

Summary: This paper sought to determine whether lower levels of empathy among a sample of medical students in the United States were associated with personal and professional distress and explored whether a high degree of personal well-being was associated with higher levels of empathy. Medical student empathy scores were higher than normative samples of similarly aged individuals and were similar to other medical student samples. Domains of burnout inversely correlated with empathy. Symptoms of depression inversely correlated with empathy for women. In contrast, students' sense of personal accomplishment demonstrated a positive correlation with empathy independent of gender. Similarly, achieving a high quality of life in specific domains correlated with higher empathy scores. On multivariate analysis evaluating measures of distress and well-being simultaneously, both burnout (negative correlation) and well-being (positive correlation) independently correlated with student empathy scores. The authors concluded that distress and well-being were related to medical student empathy. They recommended that efforts to reduce student distress be incorporated as part of broader efforts to promote student-wellbeing and professionalism.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Poor; There is a high risk of bias due to the use of a number of cut-offs that are less than standard when determining power (i.e., 90% power instead of 95%) and calculating significance (i.e., $<.1$ instead of $<.05$). Most troublesome is that the authors do not provide a correlation table with their multivariate modelling. Because the authors just present significance testing, there is no way to tell how meaningful the relationships between their variables are and what conclusions can be made.

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should integrate efforts to reduce student distress in any well-being interventions and strategies.

Priority Areas: Invest in measurement, assessment, and research

Torralba, K. D., Jose, D., & Byrne, J. (2020). Psychological safety, the hidden curriculum, and ambiguity in medicine. *Clinical Rheumatology*, 39(3), 667–671. <https://doi.org/10.1007/s10067-019-04889-4>

Summary: This paper argued that the concept of psychological safety should be embraced in medical education to allow medical students and postgraduate trainees to voice clinical reasoning in the face of ambiguity. The article proposed that: psychological safety improves communication and teamwork by allowing individuals to be comfortable expressing and being themselves, as well as comfortable sharing concerns and mistakes without fear of embarrassment, shame, ridicule, or retribution. Educators are the prime movers of psychological safety. Learners in the process of developing their self-identity in the context of their chosen profession adopt not only knowledge and skills within the framework of an explicit and formal curriculum but also norms and values from daily behaviour and language educators present in the clinical learning environment of learners. Norms and values are collectively part of a hidden curriculum. The authors recommended that educators integrate psychological safety as a concept in the learning environment to foster high-performing teams.

Type of Evidence: Narrative [case study]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should develop interventions and strategies that introduce psychological safety to the medical and clinical education levels of the health system to promote medical student well-being.

Priority Areas: Create and sustain positive work and learning environments and culture

Torralba, K. D., Loo, L. K., Byrne, J. M., Baz, S., Cannon, G. W., Keitz, S. A., Wicker, A. B., Henley, S. S., & Kashner, T. M. (2016). Does psychological safety impact the clinical learning environment for resident physicians? Results from the VA's learners' perceptions survey. *Journal of Graduate Medical Education*, 8(5), 699–707. <https://doi.org/10.1007/s10067-019-04889-4>

Summary: This paper assessed whether resident physicians believe they are psychologically safe and if PS is associated with how they rate satisfaction with their clinical learning experience. Data were extracted from the Learners' Perceptions Survey (LPS) of residents who rotated through a Department of Veterans Affairs healthcare facility for the academic years 2011–2014. Among respondents, 89% agreed that “. . . members of the clinical team of which I was part are able to bring up problems and tough issues.” Residents were more likely to report PS if they were male, were in a less complex clinical facility, in another medicine or psychiatry specialty, or cared

for patients who were aged, had multiple illnesses, or had social support. Nonpsychiatric residents felt safer when treating patients with no concurrent mental health diagnoses. PS was strongly associated with how residents rated their satisfaction across four domains of their clinical learning experience the authors concluded that PS was an important factor in resident satisfaction across four domains and recommended that graduate medical education programs consider when assessing clinical learning experiences.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Moderate; Psychological safety is defined as "the perception that it is safe to take interpersonal risks in the work environment". However, it is measured with a single item, "members of the clinical team of which I was a part are able to bring up problems and tough issues", which may not accurately assess the underlying theoretical construct, especially as psychological safety is in relation to one's own perception, and the item is other-oriented.

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW should consider the role of PS in medical education-level interventions and as strategies to increase satisfaction.

Priority Areas: Create and sustain positive work and learning environments and culture

Tsuji, S. R. J., Zuk, A. M., Solomon, A., Edwards-Wheesk, R., Ahmed, F., & Tsuji, L. J. S. (2023). What is wellbeing, and what is important for wellbeing? Indigenous voices from across Canada. *International Journal of Environmental Research and Public Health*, 20(17), 6656.
<https://doi.org/10.3390/ijerph20176656>

Summary: This paper conceptualized well-being from an Indigenous perspective using a partnership approach based on respect, equity, and empowerment. One primary data source and two existing data sources were examined and analyzed thematically utilizing a combination of deductive and inductive coding. Indigenous leadership and organizations viewed wellbeing holistically and conceptualized wellbeing multi-dimensionally. From across Canada, well-being was communicated as physical, economic, political, social, and cultural. The scaling of well-being represented a collectivist perspective, and the land was the connecting thread between all types of well-being, being a place to practice cultural traditions, reassert one's Indigenous identity, find solace, and pass on Indigenous knowledge and languages. Although wellbeing was discussed in the context of the individual, family, community, and nation, wellbeing was most often discussed at the cultural level by regional and national Indigenous leadership and organizations. The authors recommend considering the reported themes as foundational for any interaction with Indigenous peoples, especially in the context of land, culture, and development.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: All Health Professions

Relevance: This paper suggests that the NPHWW should consider Indigenous conceptualizations of well-being when designing interventions and strategies to promote well-being across health systems.

Priority Areas: Recruit and retain a diverse and inclusive health workforce

Wallace, J. E., Lemaire, J. B., & Ghali, W. A. (2009). Physician wellness: A missing quality indicator. *The Lancet*, 374(9702), 1714–1721. [https://doi.org/10.1016/S0140-6736\(09\)61424-0](https://doi.org/10.1016/S0140-6736(09)61424-0)

Summary: This paper reviewed the work stresses faced by physicians, the barriers to attending to wellness, and the consequences of unwell physicians to the individual and to healthcare systems. It argued for routinely measuring physician wellness and discussed some challenges associated with implementation. Workplace stressors included workload, work hours, fatigue, emotional interactions, cognitive demands, restricted autonomy, and structural and organizational changes. Barriers to attending to wellness included physicians' indifference to personal wellness, neglect of self-care, coping by denial and avoidance, conspiracy of silence, and predisposing personality traits. The consequences included stress, burnout, depression, relationship troubles, substance abuse, and risk of suicide, as well as recruitment and retention issues, lowered productivity, suboptimal patient care, reduced satisfaction, and increased risk of medical errors. The authors recommended incorporating physician wellness as a quality indicator to promote dialogue, prioritize physician wellness, and create a culture of care.

Type of Evidence: Systematic review [narrative]; Peer-reviewed; Canada

Quality: Poor; There is a high risk of bias as the review lacks a clear research question and provides inadequate details on the inclusion criteria and analysis of the articles. It does not meet the quality standards of a systematic review.

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW is appropriately focused and should consider ways to integrate physician wellness as a healthcare quality indicator to promote the uptake of well-being strategies and interventions.

Priority Areas: Support mental health and reduce stigma

West, C. P., Shanafelt, T. D., & Kolars, J. C. (2011). Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents. *JAMA*, 306(9), 952–960. <https://doi.org/10.1001/jama.2011.1247>

Summary: This paper measured well-being in a national sample of internal medicine residents to evaluate relationships with demographics, educational debt, and medical knowledge. A cross-sectional survey of internal medicine residents using data collected on 2008 and 2009 Internal Medicine In-Training Examination (IM-ITE) scores and the 2008 IM-ITE survey. Quality of life was rated “as bad as it can be” or “somewhat bad” 14.8%. Overall burnout and high levels of emotional exhaustion and depersonalization were reported by 51.5%, 45.8%, and 28.9% responding residents, respectively. In multivariable models, burnout was less common among international medical graduates than among US medical graduates (45.1% vs 58.7%). Greater educational debt was associated with the presence of at least one symptom of burnout. Residents reporting QOL “as bad as it can be” and emotional exhaustion symptoms daily had mean IM-ITE scores 2.7 points and 4.2 points lower than those with QOL “as good as it can be” and no emotional exhaustion symptoms, respectively. Residents reporting debt greater than \$ 200,000 had mean IM-ITE scores 5.0 points lower than those with no debt. These differences were similar in magnitude to the 4.1-point and 2.6-point mean differences associated with progressing from first to second and second to third years of training, respectively. The authors concluded that suboptimal QOL and symptoms of burnout were common. Symptoms of burnout were associated with higher debt and were less frequent among international medical graduates. Low QOL,

emotional exhaustion, and educational debt were associated with lower IM-ITE scores. Distress among physicians during medical training was common. Factors such as physician burnout, depression, job dissatisfaction, and low quality of life (QOL) were associated with negative effects on patient care, including major medical and medication errors, suboptimal care practices, and decreased patient satisfaction with medical care.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW is appropriately focused and should develop interventions and strategies to improve medical residents' well-being and mitigate burnout, improve patient care, reduce medical errors, and increase patient satisfaction. It also suggests that student debt and quality of life may be important factors to address in improving resident well-being.

Priority Areas: Invest in measurement, assessment, and research

West, C. P., Tan, A. D., Habermann, T. M., Sloan, J. A., & Shanafelt, T. D. (2009). Association of resident fatigue and distress with perceived medical errors. *JAMA*, 302(12), 1294–1300.
<https://doi.org/10.1001/jama.2009.1389>

Summary: This paper sought to determine the association of fatigue and distress with self-perceived major medical errors among resident physicians using validated metrics. A prospective longitudinal cohort study of categorical and preliminary internal medicine residents at Mayo Clinic, Rochester, Minnesota. The mean response rate to individual surveys was 67.5%. A total of 39% reported making at least one major medical error during the study period. In univariate analyses, there was an association of subsequent self-reported error with the Epworth Sleepiness Scale score and fatigue score. Subsequent error was also associated with burnout, emotional exhaustion, lower personal accomplishment, a positive depression screen, and overall. Fatigue and distress variables remained statistically significant when modelled together with little change in the point estimates of effect. Sleepiness and distress, when modelled together, showed little change in point estimates of effect, but sleepiness no longer had a statistically significant association with errors when adjusted for burnout or depression. The authors concluded that among internal medicine residents, higher levels of fatigue and distress were independently associated with self-perceived medical errors.

Type of Evidence: Cohort [prospective]; Peer-reviewed

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the NPHWW is appropriately focused and should explore interventions and strategies to reduce fatigue and distress among medical residents and mitigate medical errors.

Priority Areas: Invest in measurement, assessment, and research

White, D. G., O'Brien, M. A., Cornacchi, S. D., Freeman, R., & Grunfeld, E. (2023). COVID-19: A qualitative analysis of academic family physician leaders' crisis response. *Family Medicine*, 55(1), 38–44. <https://doi.org/10.22454/FamMed.55.421082>

Summary: This paper aimed to gain insight into the context, process, and nature of family medicine leaders' discussions in pivoting to address a crisis, given the impact of COVID-19 on all aspects of family medicine. A qualitative descriptive design focused on the family medicine department of the University of Toronto. To identify leadership themes, a constant comparative method was used to analyze transcripts of the departmental executive's monthly meetings: three meetings immediately before and three following the declaration of a state emergency in Ontario. Six themes were evident before and after the onset of the pandemic: building capacity in academic family medicine, developing leadership, advancing equity, diversity, and inclusion, learner safety and wellness, striving for excellence, and promoting a supportive and collegial environment. Five themes emerged as specific responses to the crisis: situational awareness, increased multidirectional communication, emotional awareness, innovation in education and patient care, and proactive planning for extended adaptation to the pandemic. The authors concluded that existing cultural and organizational approaches formed the foundation for the crisis response. At the same time, crisis-specific themes reflected skills and attitudes that were essential in clinical family medicine, including adapting to community needs, communication, and emotional awareness.

Type of Evidence: Qualitative; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This paper suggests that the skills and culture of the family medicine department of the University of Toronto may be worth replicating or adapting in interventions and strategies focused on crisis management and effective work environments.

Priority Areas: Invest in measurement, assessment, and research

Wilgenbush, C., Stebner, C., Bryce, R., Geller, B. (2023). Post-traumatic stress disorder in a Canadian population of medical students, residents, and physicians. *International Journal of Risk & Safety in Medicine* 35 (2024) 191–201. <https://doi.org/10.3233/JRS-230041>

Summary: This study evaluates the prevalence of post-traumatic stress disorder (PTSD) among medical students, residents, and physicians in Canada. The researchers used the Life Events Checklist (LEC) for DSM-4 and the PTSD Checklist for DSM-4-Civilian version (PCL-C) to survey 3,036 participants. The findings revealed that 21.2% of respondents screened positively for PTSD, with a significant number reporting work-related events as triggers. The study highlights the need for targeted interventions to address PTSD in medical professionals, emphasizing the importance of supportive work environments and mental health resources.

Type of Evidence: Descriptive cross-sectional; Peer-reviewed; Canada

Quality: Good

Health Workforce Profession: Physicians

Relevance: This report suggests the NPHWW should consider preventative strategies that build resilience for medical students and ongoing reinforcement throughout physician career progression.

Priority Areas: Create and sustain positive work and learning environments and culture; Institutionalize and invest in well-being as a long-term value

Wilke, T., Jones, R. M., Ramshaw, L. Glancy, G., Groat, L. & Chatterjee, S. (2024). Contributors to physician burnout and well-being in forensic psychiatrists in Canada. *J AM Acad Psychiatry Law* 52, 41-50. DOI:10.29158/JAAPL.230078-23

Summary: A national survey of forensic psychiatrists in Canada revealed that over half experience burnout, particularly early-career professionals and those facing value misalignment with their workplace. While intellectual stimulation, legal system engagement, and job flexibility were linked to professional fulfillment, the findings underscore a pressing need for institutional and systemic interventions to support health workforce wellbeing. By expanding the conversation around burnout and wellness, the study aims to inform strategies that enhance fulfillment, recruitment, and retention in forensic psychiatry.

Type of Evidence: Descriptive cross-sectional; Peer-reviewed; Canada

Quality: Poor; Underpowered (n=41), limiting generalisability and validity; Used multiple measures for burnout and ran analyses using the measure that received the highest burnout scores introducing a high risk of bias; rationale for decisions related to significance (i.e., $p < .1$) are not provided.

Health Workforce Profession: Physicians

Relevance: This article suggests the NPHWW should prioritize targeted strategies to address burnout among forensic psychiatrists.

Priority Areas: Institutionalize and invest in well-being as a long-term value

World Health Organization. (2021). Health promotion glossary of terms 2021.

<https://iris.who.int/bitstream/handle/10665/350161/9789240038349-eng.pdf>

Summary: This glossary was updated from the 1986 edition to reflect the growing focus on well-being in healthcare. Developed in consultation with key staff and departments at WHO and with the support of an Advisory Group. Thirty-four terms were defined in two categories: core terms and health promotion. The definitions were intentionally concise and not intended as full interpretations, which may be found in other publications. For each definition, short notes of explanation were added. The authors recommended using the glossary to facilitate communication both between and within countries and among the professions and sectors directly and/or indirectly contributing to the promotion of health.

Type of Evidence: Glossary; Grey literature

Quality: Not appraised

Health Workforce Profession: All Health Professions

Relevance: This suggests the NPHWW may benefit from referring to the glossary to ensure consistency.

Priority Areas: Invest in measurement, assessment, and research

World Health Organization. (2022a). QD85: Burnout. *ICD-11: International Classification of Diseases (ICD): 11th Revision*. <https://icd.who.int/browse/2024-01/mms/en#129180281>

Summary: The WHO ICD for Mortality and Morbidity Statistics defines burnout as a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: 1) feelings of energy depletion or exhaustion; 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and 3) a sense of ineffectiveness and lack of accomplishment. Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life. The ICD is used worldwide for morbidity and mortality statistics, reimbursement systems, and automated decision support in healthcare. It is designed to promote international comparability in the collection, processing, classification, and presentation of these statistics.

Type of Evidence: Database; Grey literature

Quality: Not appraised

Health Workforce Profession: All Health Professions

Relevance: This definition suggests the NPHWW should address the three dimensions of burnout and consider it a phenomenon exclusive to the workplace.

Priority Area: Invest in measurement, assessment, and research; Institutionalize and invest in well-being as a long-term value

World Health Organization. (2022b). *Achieving well-being: A global framework for integrating well-being into public health utilizing a health promotion approach*. <https://www.who.int/publications-detail-redirect/9789240084858>

Summary: This report brought together the most effective strategic directions and policy orientations from the global health community. It served as an umbrella guide to Member States and partners in their efforts to foster the development of well-being societies for all. World Health Organization Director-General developed the framework within the broad mandate of WHO and building on the 2030 Agenda for Sustainable Development with its 17 Sustainable Development Goals (SDGs). The report addressed the vision, goal, key objectives, and foundations of a well-being framework and defined the following strategic directions: nurturing planet Earth and its ecosystems; designing social protection and welfare systems based on equity, inclusion and solidarity; designing and supporting implementation for equitable economies that serve human development; promoting equitable universal health coverage through primary health care, health promotion, and preventative services; promoting equitable digital systems that serve as public utilities, contribute to social cohesion, and are free of commercial interest; measuring and monitoring well-being. The report concluded that the Framework would require a whole of government and societal transition. It recommended that key partners, including nongovernmental and civic organizations, academia, business, governments, and international organizations, engage in effective partnerships based on consensus and accountability for the decisive implementation of strategies for health promotion and well-being.

Type of Evidence: Policy [recommendations]; Grey literature

Quality: Fair; The evidence gathering and methods informing recommendations are not clearly stated.

Health Workforce Profession: All Health Professions

Relevance: This report underlines the NPHWW's importance in addressing healthcare worker wellbeing, a key component in developing societal well-being. It also suggests that the NPHWW develop well-being indicators in interventions and strategies to monitor and advance progress.

Priority Areas: Invest in measurement, assessment, and research; Engage effective resources to minimize administrative burden

Yuan, J. H., Huang, Y., Rosgen, B. K., Donnelly, S., Lan, X., & Katz, S. J. (2023). Burnout and fatigue amongst internal medicine residents: A cross-sectional study on the impact of alternative scheduling models on resident wellness. *PLOS ONE*, 18(9), e0291457. <https://doi.org/10.1371/journal.pone.0291457>

Summary: This study sought to characterize drivers and outcomes of fatigue and burnout amongst internal medicine residents across different scheduling models. Cross-sectional surveys were distributed among internal medicine resident physicians at the University of Alberta. Sixty-nine participants completed burnout questionnaires, and 165 fatigue questionnaires were completed (response rate of 48%). The overall prevalence of burnout was 58%. Lower burnout prevalence was noted among respondents with dependent(s) who identified as a racial minority or completed their medical degree internationally. The 1-in-4 model (residents complete in-hospital 24-hour shifts on average every four days during the rotation, typically a maximum of seven shifts per month) was associated with the highest levels of fatigue and reported increased risk towards personal health and occupational or household harm. Alternative scheduling models were not associated with these hazards. The authors concluded that the 1-in-4 scheduling model was associated with high rates of resident physician fatigue, and alternative scheduling models were associated with less fatigue. Strong social supports outside the workplace best characterized protective factors against fatigue.

Type of Evidence: Analytical cross-sectional [quantitative]; Peer-reviewed

Quality: Moderate; The authors used univariate analyses to examine demographic information, resulting in small sample sizes and limited meaningful inferences due to the sample size.

Health Workforce Profession: Physicians

Relevance: This paper suggests the NPHWW may benefit from proposing alternative scheduling models to the 1-in-4 to mitigate resident burnout and consider the role of strong social support outside the workplace in protecting against fatigue.

Priority Areas: Invest in measurement, assessment, and research; Institutionalize and invest in well-being as a long-term value

Appendix A.

2025 Annotations



The following citations were added the 2025 version of this annotated bibliography.

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Appendix B.

Critical Appraisal Tools



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