

Thematic Literature Analysis: 2025 Update

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

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FINAL

PREPARED FOR:

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

PREPARED BY:

DPRA Canada Inc.
1 Yonge Street, Suite 1203
Toronto, Ontario M5E 1E5
416-945-9904
www.dpra.ca





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List of Acronyms

CAHS.....	Canadian Academy of Health Sciences
CAMH.....	Canadian Addiction and Mental Health
CAMRT.....	Canadian Association of Medical Radiation Technologists
CDAA.....	Canadian Dental Assistants Association
CIHI	Canadian Institute for Health Information
CMA.....	Canadian Medical Association
CMHA.....	Canadian Mental Health Association
COVID-19 ...	SARS-CoV-2
ECHO	Extension of Community Health Outcomes
HEC.....	Health Excellence Canada
IT	Information Technology
MCAT	Medical College Admission Test
MD.....	Medical Doctor
NAM.....	National Academy of Medicine
NPHWW	National Plan for Health Workforce Well-Being
ORASE	Office of Regulatory Affairs and Service Effectiveness
OUSSG.....	Office of the U.S. Surgeon General
OUSSG.....	Office of the United States Surgeon General
PTSD	Post-Traumatic Stress Disorder
SEM.....	Socio-ecological Model
TRC	Truth and Reconciliation Commission of Canada
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
WHO.....	World Health Organization
WIFI.....	Wireless Fidelity

Executive Summary

Background

The Royal College of Physicians and Surgeons of Canada (Royal College) received a \$3.5 million grant from Health Canada to work with partners to develop and evaluate a National Plan for Health Workforce Well-Being (NPHWW). An environmental scan of the best available evidence to support the development of this NPHWW was completed and is presented in this report as a thematic analysis of the literature.

Purpose

The purpose of this thematic analysis of literature was to consolidate the evidence with reference to the six priority areas that have been identified for the NPHWW in order to: validate that the strategic priorities were relevant and appropriate within the Canadian context; ensure the inclusion of research related to the diverse health professions that make up Canada's health workforce; identify the key themes in the evidence to support the development of action plans for each priority; and conduct an analysis of the key strengths, weaknesses, and gaps in the available evidence for each priority area and discuss its relevance and application to the NPHWW.

Results

A comprehensive analysis of 108 articles examined evidence related to health workforce burnout. The findings were categorized according to priority areas to reveal the key factors contributing to burnout, effective strategies for addressing these factors, and gaps and limitations in the current research to provide a clear understanding of the health workforce burnout landscape and highlight opportunities for further investigation and intervention.

Implications for the NPHWW

The 2025 update added 52 new sources to the thematic analysis completed in 2024. The update has reinforced the validity of the thematic framework established in 2024 while enhancing its practical application across the Canadian health sector. Grounded in the best available evidence from a wide range of Canadian health professions, the framework now offers more robust and actionable guidance for addressing workforce well-being and burnout.

The review supported the strategic priorities identified for the NPHWW, and proposes the following adjustments to three priorities:

- Redefine "Institutionalize and Invest in Well-Being as a Long-Term Value" to focus on issues that affect the resilience of the health system now and into the future.
- Redefine "Create and Sustain Positive Work and Learning Environments" to emphasize the influence of organizations and culture on the individual and interpersonal aspects of well-being.

- Rename "Invest in Measurement, Assessment, Strategies and Research" to "Invest in Measurement, Assessment and Research" to avoid redundancy with the strategies presented in all priority areas.

The review identified four cross-cutting themes that offer important consideration for all six priority areas, which include:

- Using adaptive and developmental evaluation approaches to address evidence limitations.
- Establishing metrics and goals to prioritize well-being.
- Favoring organization-directed interventions over individual-directed approaches.
- Integrating diverse leadership to increase representation and address systemic barriers.

This comprehensive analysis aims to support the development of a more effective and contextually appropriate plan for improving health workforce well-being in Canada, addressing both immediate needs and the long-term sustainability of the health system.

1. Introduction

The Royal College of Physicians and Surgeons of Canada (Royal College) received a \$3.5 million grant from Health Canada to work with partners to develop and evaluate a National Plan for Health Workforce Well-Being (NPHWW). The NPHWW will focus on improving health workforce conditions and influencing culture to reduce burnout, minimize administrative burden, and recruit and retain a diverse, inclusive workforce to meet Canadians' current and future healthcare needs.

The project builds upon a similar initiative in the United States led by the National Academies of Medicine (National Academies of Medicine (NAM), 2024a). The Royal College project will explore six priority areas identified through that initiative:

1. Create and sustain positive work and learning environments and culture.
2. Invest in measurement, assessment, strategies, and research.
3. Support mental health and reduce stigma.
4. Engage effective resources to minimize administrative burden.
5. Institutionalize and invest in well-being as a long-term value.
6. Recruit and retain a diverse and inclusive health workforce focused on meeting current and future needs.

The Royal College contracted DPRA Canada Inc. to conduct an environmental scan of the best available evidence to support the development of the NPHWW. The environmental scan includes an annotated bibliography and a thematic analysis of peer-reviewed and grey literature. The following report presents the findings of the environmental scan.

2. Purpose and Scope

The purpose of this thematic analysis of literature was to consolidate the best available evidence with reference to the six priority areas that have been identified for the NPHWW in order to:

- Ensure the inclusion of research related to the diverse health professions that make up Canada's health workforce up to June 2025.
- Validate that the strategic priorities were relevant and appropriate within the Canadian context.
- Identify the key themes in the evidence to support the development of action plans for each priority
- Conduct an analysis of the key strengths, weaknesses, and gaps in the available evidence for each priority and discuss its relevance and application to the NPHWW.

3. Methodology

3.1 Search Strategy and Results

This thematic literature review presents a synthesis and analysis of the literature included in an environmental scan of grey and peer-reviewed literature related to the six identified priority areas for the NPHWW. The scan was initiated in 2024 and updated in 2025 to expand the analysis to ensure the inclusion of research related to the diverse health professions that make up the health workforce in Canada.

Sources were identified through searches of Canadian health organization websites, academic databases, and contributions from individuals participating in the development of the NPHWW. The 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. Selected articles published prior to this period were included if deemed relevant.

The evidence included in this review was critically appraised to determine whether the findings were reliable, meaningful, and applicable to the development of the NPHWW. The critical appraisal results can be found in the companion annotated bibliography report (DPRA Canada, 2025).

A summary of the sources included in the thematic analysis is detailed in Table 1.

Table 1. Summary of sources by evidence type and health profession

Health Profession	Number of sources
Physicians	64
All Health Professions	28
Registered Nurses, Nurse Practitioners, Practical Nurses	14
Midwives	5
Social Workers	5
Dentists	3
Respiratory Therapists	3
Pharmacists	2
Medical Radiation Technologists	2
Dental Assistants	1
Psychologist, Psychotherapist	1
Allied Health Professionals (undefined)	1
Occupational Therapist	1
Physiotherapist	1
Chiropractors	1
Medical Laboratory Technicians	1
Paramedics	1
Support Workers	1
Occupational Therapists	1
Speech-language Pathologists	1

Type of Evidence	Number of sources
Analytical cross-sectional	35
Expert opinion	27
Policy	22
Qualitative	15
Systematic review	13
Descriptive cross-sectional	12
Narrative [case study, podcast]	12
Cohort	3
Theory-based evaluation	1
Glossary	1
Database	1

3.2 Approach to Synthesis and Analysis

Full-text articles were imported to NVivo, a qualitative analysis software package, and coded through a deductive process to assess their relevance and applicability to the NPHWW priority areas. The key findings, strengths, weaknesses, and gaps in the evidence supported the development of themes within each priority area. These themes highlight the prevalence of key issues, their influencing factors, and strategies for improvement, thereby informing actionable recommendations for the NPHWW.

The findings are organized according to the identified priority areas, which are intended to address well-being across Canada's health systems. 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.

4. Results

4.1 Overview of Health Workforce Well-being in Canada

The well-being of the health workforce in Canada has become an increasingly urgent concern, shaped by long-standing systemic challenges and the profound impact of the COVID-19 (SARS-CoV-2) pandemic (Casey, 2023; Canadian Academy of Health Sciences (CAHS), 2023; Canadian Medical Association (CMA), 2018; CMA, 2022; Canadian Institute of Health Information (CIHI), 2023; Singh et al., 2024). Even before the pandemic, Canada's health system faced significant shortages across professions, including dentists, medical laboratory professionals, occupational therapists, speech-language pathologists, audiologists, and many other health providers (Casey, 2023). Nearly a third of physicians and nurses were already reporting substantial symptoms of burnout, depression, and anxiety as early as 2019 (Casey, 2023). The COVID-19 pandemic amplified these workforce challenges, intensifying stress and burnout across the sector. By 2022, 95% of health workers¹ reported that their work was affected by the pandemic, and 86.5% indicated increased stress (Statistics Canada, 2022).

Burnout among physicians has risen sharply since before the pandemic. In 2018, the CMA National Physician Health Survey reported a burnout prevalence of 30% (n=2,744) among Canadian physicians (CMA, 2018). By 2021, this rate had increased to 53% (n=3,489), representing a 1.7-fold rise (CMA, 2022). A 2017 survey in Saskatchewan further revealed that 21% (n=565) of medical students, residents, and physicians screened positive for high post-traumatic stress disorder (PTSD) risk—three times higher than the estimated general population rate of 7% (Wilgenbusch et al., 2023). More recent evidence confirms that high stress and burnout levels remain persistent. For example, a longitudinal study of emergency physicians across Canada found that in 2022, 59% (n=225) reported high emotional exhaustion and 64% high depersonalization—both significantly higher than in 2020 (de Wit et al., 2024).

***Well-being** is a positive state experienced by individuals, encompassing quality of life and the ability to contribute to the world with a sense of meaning and purpose.*

***Burnout** is a syndrome resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions:*

- 1. High emotional exhaustion or feelings of energy depletion*
- 2. Increased mental distances from one's job, or feelings of negativism or cynicism related to one's job*
- 3. A low sense of personal accomplishment or a sense of ineffectiveness.*

(World Health Organization (WHO), 2022a)

¹ Includes health care workers and personnel working in health care settings across Canada's ten provinces since the start of the COVID-19 pandemic, including those providing direct care, technical support (e.g., laboratory technician), supervision, or emergency services such as paramedics and firefighters.

Notably, emergency physicians also were found to have the youngest average age of death among physician specialties (Li et al., 2024). A 2022 Statistics Canada survey reported that 83.7% of physicians felt more stressed due to the pandemic, with 11.1% intending to leave or change their job within the next three years (Statistics Canada, 2022). Similarly, a 2022 national survey of forensic psychiatrists found that 41.2% (n=21) met criteria for burnout (Wilkie et al., 2024).

Comparable trends are evident across other health professions. Prior to the pandemic, a Toronto-based study of health professionals—including physical, respiratory, and occupational therapists, pharmacists, social workers, dietitians, and speech-language pathologists—found that 73% (n=33) reported symptoms of burnout, while 69% (n=31) experienced emotional problems within the past month (Rubin et al., 2021). Among dentists, 44% (n=174) reported mental health concerns such as depression, anxiety, and PTSD, with women disproportionately affected (59%, n=87) compared to men (39%, n=67) (Maragha et al., 2024). Hospital pharmacists have also been heavily impacted: 61.4% (n=105) reported burnout characterized by high emotional exhaustion, depersonalization, and diminished personal accomplishment (Blue et al., 2022).

Nurses and personal support workers (PSWs) experienced particularly high stress during the pandemic. In 2022, Statistics Canada reported that 92% of nurses and 83% of PSWs and care aides faced heightened workplace stress, while 24.4% of nurses and 16.4% of PSWs intended to leave their positions within three years (Statistics Canada, 2022). Public health professionals² reported similar experiences, with 78.7% (n=2,079) experiencing burnout nationally (Singh et al., 2024). In Saskatchewan, 71.4% (n=1,497) of health professionals—including registered nurses, physicians, and respiratory therapists—reported symptoms of burnout (Sheekha et al., 2024). Medical laboratory professionals also showed significant strain: 67% (n=191) felt overwhelmed by workload, and 14% reported emotional exhaustion, nearly doubling rates of serious psychological distress compared to 2018 (Djukic, 2021).

Burnout is also widespread among midwives. A survey of Ontario midwives found that 76% (n=275) experienced moderate to extreme levels of personal burnout and 66% moderate to extreme levels of work-related burnout (Cates et al., 2024). A separate national survey of 159 midwives and midwifery students reported that 79% had mental health challenges (Thiessen et al., 2024).

The consequences of these trends are profound. At the individual level, health workers experiencing burnout face heightened risks of occupational injury, problematic alcohol use, suicide, diminished work-life satisfaction (NAM, 2019; Olson, 2017), emotional exhaustion, disengagement (Singh et al., 2024), strained family life, and reduced capacity to provide compassionate care (Hancock et al., 2020). For learners entering the health professions, burnout is associated with career regret and suboptimal professional development (NAM, 2019; Thiessen et al., 2024).

At the organizational level, burnout and mental health distress are strongly linked to intentions to leave the profession or withdraw from clinical practice (CMA, 2022; Canadian Association of Medical Radiation Technologists (CAMRT), 2024; Cates et al., 2024; Sheekha et al., 2024; Sinksy & Panzer, 2022; Singh

² Includes frontline community providers such as nurses, public health inspectors, dental health professionals; technical experts such as epidemiologists and program specialists; physicians (medical officers of health); management; and administrative support

et al., 2024; Statistics Canada, 2022; Thiessen et al., 2024). These issues have direct implications for the health system as a whole. Burnout undermines access to primary care, where one in four Canadians lacks a primary care provider (OurCare, 2023; 2024)—and increases risks to patient safety by raising the likelihood of medical errors (West et al., 2009). Moreover, it threatens the sustainability of the health system by exacerbating workforce retention challenges (Duong & Vogel, 2023; Health Canada, 2022; Statistics Canada, 2022) and driving vacancy rates upward (CIHI, 2024a; CIHI, 2024b).

In summary, the evidence demonstrates widespread and persistent burnout and mental health distress across Canadian health professions, both before and after the COVID-19 pandemic. These challenges have significant consequences for individuals, organizations, and the overall quality and sustainability of the health system. Importantly, the measures used to assess burnout and mental health distress vary widely across the studies included in this review, which may influence prevalence estimates and complicate direct comparisons across professions and time periods.

4.2 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.

This section analyzes 43 sources to explain the interpersonal and organizational factors that influence the working and learning environment of health professionals. It also provides specific strategies that have been shown to address these factors and discusses the gaps and limitations of the available evidence.

4.2.1 Factors that Shape Work and Learning Environments

Organizational Leadership

While positive, supportive leadership in health organizations can enhance the well-being and job satisfaction of health professionals (Bourgeault et al., 2022; Karniel-Miller et al., 2010), the reverse is also true (Akoo et al., 2024; D'Alessandro-Low et al., 2025; Duan et al., 2025). Negative leadership approaches such as abusive or authoritarian styles, unreasonable expectations, intimidation, and laissez-faire attitudes that avoid responsibility create challenging work environments (Akoo et al., 2024; D'Alessandro-Low et al., 2025; Dextras-Gauthier et al., 2023). Additionally, leaders that provide inadequate support, communicate poorly, assign overwhelming workloads, and fail to offer professional development opportunities contribute to practitioner's distress (Jelen et al., 2024).

Research has shown that health professionals who work under supervisors with negative leadership styles experience higher levels of stress, poorer mental health, increased burnout, greater emotional exhaustion, and are more likely to express intentions to leave their organization (Akoo et al., 2024; CAHS, 2023; Jelen et al., 2024; Rubin et al., 2024). Building on this, Bourgeault et al. (2022) demonstrated that supportive leadership is pivotal throughout the mental health leave and return-to-work pathway for Canadian nurses, physicians, midwives, and dentists. The study found that financial benefits and supportive supervisors and colleagues were the most important facilitators for both taking a leave of absence for mental health reasons and successfully returning to work. In contrast, unsupportive supervisors, inadequate workplace accommodations, and gaps in organizational policies were frequently cited as barriers (Bourgeault et al. 2022).

Several studies highlighted an ideological tension between frontline health workers and organizational leadership. Health professionals are committed to a culture of care and service, prioritizing patient well-being, ethical practice, and emotional presence (Akoo et al., 2024; Jelen et al., 2024). Health organization leadership, by contrast, is perceived as operating within a culture of efficiency, control, and cost containment, often at the expense of staff well-being and patient-centred care (Akoo et al., 2024; Jelen et al., 2024). As these tensions between personal values and organizational priorities persist, leadership approaches play a pivotal role in shaping work environments. The impact of these dynamics is key to understanding and addressing burnout among health professionals.

Disrespectful Behaviour and Moral Distress

Experiences of disrespectful behaviour and moral distress resulting from interprofessional stressors in health organizations can undermine wellbeing, disrupt professional relationships, and contribute to burnout among health professionals (D'Alessandro-Low et al., 2025; James et al., 2019; Harry Cummings and Associates, 2019; Hancock et al., 2020; Akoo et al., 2024; Jelen et al., 2024; Maragha et al., 2024). Leape et al. (2012) categorizes disrespectful behaviour into six forms: disruptive conduct, humiliating or demeaning treatment, passive-aggressive behaviour, passive disrespect, dismissiveness, and systemic disrespect. These behaviours can range from minor breaches of courtesy to serious violations of others' emotional and physical wellbeing (Karnieli-Miller et al., 2010). Regardless of severity, disrespect undermines collegiality, cooperation, communication, and the adoption of new practices (Leape et al., 2012).

Disrespectful behaviour such as bullying, harassment, and ageism are prevalent in healthcare settings and have been linked to burnout, emotional distress, and diminished wellbeing among health professionals (Akoo et al., 2024; Singh, 2024; Purchase et al., 2024; Maragha, et al., 2024). During the COVID-19 pandemic, eight in 10 health workers reported incidents of physical or verbal abuse (National Nurses United, as cited in Murthy Vivkek, 2022). Similarly, a national survey of dental assistants highlighted high rates of mistreatment: unacceptable patient behaviour (61.2%), public criticism (43.3%), bullying (43.3%), supervisor misconduct (42%), and harassment (28%) (James et al., 2019). Additionally, reports indicate that incivility and disrespect within inter-professional teams contribute to unprofessional conduct and hinder the resolution of workplace challenges, especially in settings where adequate resources or support from management are insufficient (D'Alessandro-Low et al., 2025; Jelen et al., 2024).

Moral distress arises when people find themselves in circumstances that conflict with their fundamental values and beliefs, and they lack the ability to influence or alter the situation (Jameton 1984 as cited in Hancock et al., 2020). In a qualitative study of intensive health professionals (registered nurses, respiratory therapists and physicians) moral distress arose from value–practice conflicts (e.g., perceived futile care, end-of-life discordance, constrained voice) and corrosive team climates (e.g., poor communication, disrespect, bullying). Similar findings emerged from a study of social workers in Newfoundland and Labrador where these conditions were linked with emotional exhaustion, detachment, and a reduced sense of accomplishment (Fuseini et al., 2024; Hancock et al., 2020), which are the primary characteristics of burnout (Hancock et al., 2020). Furthermore, moral distress has been associated with increased intentions to leave among health professionals (Akoo et al, 2023; Fuseini et al., 2024; Sheekha et al., 2024).

Psychologically Unsafe Work Environments

Psychological safety refers to the belief that individuals can take risks in work and learning environments—such as sharing ideas or admitting mistakes—without fear of negative consequences to their self-image, status, or career (Torralba et al., 2016). This encompasses expressing oneself authentically, voicing concerns, and acknowledging errors, all without the anxiety of embarrassment, ridicule, or shame (Maragha et al., 2024; Torralba et al., 2016; Torralba et al., 2020).

In healthcare settings, psychological safety is strongly linked to positive outcomes, including higher job satisfaction, improved retention and reduced turnover, better patient outcomes, increased engagement, enhanced quality improvement, more frequent error reporting, and effective team learning (Edmondson, 1999). For medical learners, it also contributes to greater satisfaction with their clinical experiences and fosters a strong sense of belonging and innovation (Torralba et al., 2016; Siad & Rabi, 2021). Conversely, when psychological safety is lacking, employees may experience increased turnover, elevated stress, diminished innovation, lower job satisfaction, and poorer team dynamics (Edmondson, 1999). Creating and sustaining psychologically safe environments is therefore essential for both individual well-being and organizational effectiveness in healthcare.

Perfectionism and Impostorism

Increasingly, physicians recognize and acknowledge that perfectionism and self-criticism can be harmful (Shanafelt, 2021). While perfectionism is often lauded as a desirable trait, representing diligence, tenacity, and goal attainment (Gaudreau et al., 2022), more recent research suggests that the many associated psychological costs of perfectionism outweigh the potentially small benefits (Gaudreau et al., 2022). Individuals who strive for perfection experience elevated doubts, concerns about their self-worth, irrational beliefs about themselves and the world, self-presentation concerns, and perceived pressure (Razzetti, 2019). They are also more likely to operate under a sense of personal and social obligations and to be chronically unsatisfied (Gaudreau et al., 2022).

Unfortunately, perfectionism is widespread in healthcare settings. Eley and colleagues (2022) found that many students begin medical school with perfectionistic mindsets, which often result from comparison to and competitiveness with others. This is a concern for medical educators because students are entering an environment (e.g., medical school, hospitals) that may exacerbate this distress, possibly to the point of developing more serious psychological problems (Gaudreau et al., 2022).

Impostorism has been shown to negatively impact the mental well-being of medical learners. It is characterized by persistent feelings of inadequacy and self-doubt, where individuals perceive themselves as less capable or intelligent than others believe, and struggle to accept their own achievements as genuine (Clance and Imes 1978; Clance and OToole 1987 as cited in Liu et al., 2022). Studies have found a high prevalence of impostorism among Canadian post-graduate medical learners across all specialties, with notably higher rates among those who identify as women. Learners affected by impostorism face a significantly increased risk of anxiety and burnout, underscoring the importance of recognizing and addressing this phenomenon to support the mental health of all medical trainees (Liu et al., 2022).

4.2.2 Strategies for Creating Positive Work and Learning Environments and Culture

Establish Supportive Organizational Leadership

Leaders play a pivotal role in shaping organizational culture and should take intentional steps to cultivate environments that are supportive, respectful, and psychologically safe. A positive culture not only enhances psychological health but also encourages constructive leadership behaviours that drive productivity, satisfaction, creativity, and quality patient care (Dextras-Gauthier et al., 2023; Do et al., 2023; Hancock et al., 2020). To achieve this, leaders must consistently model respectful behaviour in

all clinical and educational contexts and be accountable for actively enhancing their work environment (de Wit et al., 2024; Dyrbye et al., 2020).

Organizations should invest in leadership development and mentorship programs for managers that go beyond day-to-day operational management (Bourgeault et al., 2022). Effective leadership training should foster skills that inspire and motivate employees, support their professional growth, and integrate empathy with proactive guidance towards mental health resources when needed (Bourgeault et al., 2022).

The CARES Leadership model, introduced by Eastmond & Fernandes (2024), offers a practical framework for embedding trauma-informed principles (Safety, Trustworthiness and Transparency, Peer Support, Collaboration and Mutuality, Empowerment, Voice and Choice, and attention to Cultural, Historical and Gender issues) into everyday supervisory behaviours. This model encourages leaders to conduct routine guided check-ins, make decisions transparently, level power differentials explicitly, and create structured opportunities for staff voice and collaborative problem-solving. By adopting these principles, organizations can foster a psychologically safe and inclusive environment where staff feel valued, empowered, and able to contribute fully (Eastmond & Fernandes, 2024).

Fostering positive work environments also involves broad organizational initiatives to champion respect and dignity at all levels, alongside targeted leadership activities such as offering apologies, acknowledging good work, hosting debrief sessions and interprofessional huddles, and establishing values-based communication channels to share accomplishments and collect feedback. These strategies can improve employee experiences and reinforce a culture of respect, collaboration, and continuous improvement (Karnieli-Miller et al., 2010; Sokol-Hessner et al., 2018; Hancock et al., 2020; Jelen et al., 2024).

Counteract Perfectionism and Imposterism

There are several ways to discourage perfectionism in health organizations. One effective approach is to promote "excellencism" as a constructive alternative. Excellencism focuses on striving for high yet achievable standards with diligence, determination, and flexibility. This approach has been shown to yield positive short-term developmental outcomes for university students without the harmful effects linked to perfectionism (Gaudreau et al., 2022). In medical education, it is important to appropriately challenge students while providing them with the necessary support, nurturing, and clear expectations to prevent the development of perfectionistic tendencies (Eley et al., 2022). Additionally, to help address perfectionism among teams of health professionals, fostering connections and a sense of community is recommended (Mulherin, n.d.b.). This can be achieved through sharing experiences, offering mutual support, and showing attentive care for one another (Shanafelt, 2021).

To address impostorism, Liu et al. (2022) recommends normalizing impostor feelings as a common part of postgraduate training, fostering a culture where seeking help is viewed positively, and increasing formal teaching and awareness about impostorism among faculty and learners. They emphasize the importance of supportive mentorship, encouraging mentors to share their own experiences with self-doubt, and building strong interpersonal support networks (Liu et al., 2022).

Promote Psychological Safety

Psychological safety can be promoted by:

- Selecting leaders who understand and embody qualities of respect and dignity will help naturally model respectful behaviour (Sokol-Hessner et al., 2018).
- Encouraging participation and input, emphasizing the purpose of their subordinates' work, creating shared expectations and meaning, thanking and crediting others when they offer ideas, asking questions, inviting input, and responding supportively (Siad & Rabi, 2021; Torralba et al., 2016).
- Cultivating nonpunitive and empowering working and learning environments that encourage people to ask questions, admit mistakes, report errors, offer support, and destigmatize failures (Torralba et al., 2016; Torralba et al., 2020).
- Implementing strategies to improve equity including the targeted recruitment of equity-deserving workers, adopting anti-oppressive standards of practice and codes of conduct, training in implicit bias and bystander intervention, developing competency in health equity and utilizing restorative justice models of accountability (Siad & Rabi, 2021).
- Establishing procedures to analyze incidents, considering the systemic factors that contributed to the incident in addition to individual actions (Sokol-Hessner et al., 2018).

Establish Organizational Policies that Entrench Respect and Safety

By adopting organizational policies that address both physical and mental safety, health organizations can create an environment where respect and dignity are ingrained in the culture, leading to better outcomes for both staff and patients.

Leadership within health organizations should actively promote respect and dignity as fundamental values. This can be achieved by emphasizing respect in the organization's code of conduct and integrating this responsibility into job descriptions, onboarding processes, performance reviews and promotions (Sokol-Hessner et al., 2018). Additionally, leaders should be trained to hold bullying or abusive staff accountable and, when necessary, remove repeat offenders (Shapiro et al., 2019). Medical schools also play a crucial role in this effort by unequivocally supporting and being accountable for zero-tolerance harassment and mistreatment policies (Do et al., 2023), as do dentistry workplaces (Harry Cummings and Associates, 2019).

Fostering a culture of respect and dignity requires clear communication policies, particularly in response to adverse events. Organizations should implement procedures for communication, apology, and reconciliation, ensuring ongoing support for patients and families who have experienced harm (Sokol-Hessner et al., 2018; Harry Cummings and Associates, 2019). By addressing these issues transparently and compassionately, health organizations can rebuild trust and demonstrate their commitment to respect as a core value. Likewise, creating patient rights and responsibilities charters that protect staff from abuse and establishing procedures to address incidents of patient harassment are crucial steps in maintaining a mutually respectful and safe environment.

Finally, training staff in de-escalation techniques and embedding security personnel and procedures in units where violence is likely, such as psychiatric and emergency units (Health Canada, 2022) and

aligning key functions such as patient safety, patient relations, and risk management under a single leader can enhance coordination and ensure consistent implementation of improvements across the organization (Sokol-Hessner et al., 2018).

Build Resilience and Empathy

Empathy and resilience are essential qualities for health professionals, and health organizations play a role in fostering these attributes to create safe and supportive work environments. Enhancing empathetic communication, which involves listening actively without judgment or trying to influence the other person's thoughts, is essential for improving medical culture and patient care (Asch et al., 2021; CMA 2020; Shanafelt et al., 2005). Research shows that interventions such as communication skills training, motivational interviewing, and integrating humanities into medical education can enhance empathy both immediately and in the long term (Shanafelt et al., 2005; Hancock et al., 2020; Kelm et al., 2014). Additionally, personal development programs can help build resilience and enable health professionals to adopt a more holistic focus of well-being (Shanafelt et al., 2020; Hancock et al., 2020).

Foster Cohesive Interprofessional Teams

Fostering positive interprofessional relationships can enhance work experiences and improve the delivery of quality patient care (Hancock et al., 2020; Jelen et al., 2024). Interprofessional teams can be strengthened using strategies to improve real-time information sharing, role clarity, and psychological safety across disciplines (Jelen et al., 2024). For example, regular interprofessional huddles and improved communication channels can reinforce shared team values, spotlight interprofessional wins, and encourage idea sharing across roles. As a result, communication siloes are reduced and mixed-discipline teams can more easily address surface issues and coordinate improvements (Jelen et al., 2024).

Additionally, D'Alessandro-Low et al. (2025) suggests that conflict-mitigation and respectful-leadership training, skills-based team-building, anti-harassment policies, and access to counselling can help neutralize interprofessional stressors and power dynamics (D'Alessandro-Low et al., 2025).

Gaps & Limitations

Research aimed at developing supportive environments for well-being faces notable methodological challenges. The studies encompass diverse interventions, various outcome measures, and predominantly self-reported evaluations, as well as differing definitions of efficacy, thereby complicating direct comparisons across interventions (Kolobaric et al., 2025; Liu et al., 2025). Furthermore, the predominant use of cross-sectional designs fails to establish causality and highlights the need for longitudinal replication to generate more robust evidence (Dextras-Gauthier et al., 2023). Many investigations are limited to single institutions or organizations, which restricts the broader applicability of their findings (Karnieli-Miller et al., 2010; Kelm et al., 2014). In addition, some publications omit critical details about the interventions employed, impeding efforts at replication (Kelm et al., 2014). Ultimately, the success of these strategies depends on a shared dedication to organizational cultural change and the prioritization of positive work and learning environments (Siad & Rabi, 2021).

4.3 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.

This section draws upon 23 sources to identify the barriers to receiving mental health support among health workers and offers strategies to support mental health and reduce stigma. The gaps and limitations of the available evidence are also discussed.

4.3.1 Barriers to Seeking Support

Stigma

The stigma that results from negative perceptions, attitudes, and discrimination associated with seeking mental health care is pervasive in healthcare settings and throughout our society (NAM, 2019). Stigma is perpetuated in the health professions because of cultural norms within education programs, personal biases within the profession, and the expectations and responses of health organizations, licensure boards, and other external organizations. Reducing stigma and eliminating barriers to mental health care is critical to improving the well-being of health professions (NAM, 2019).

Although physicians are generally aware of available mental health services, such as provincial programs, many remain reluctant to seek support due to concerns about the perceived severity of their situation, feelings of shame, and fear of being viewed as weak or unable to cope (CMA, 2022; Wallace et al., 2009). For example, a 2018 CMHA survey found that among the 18% of Canadian physicians identified as depressed, only 25% considered seeking help, and just 2% actually did so (Wallace et al., 2009). The most commonly cited barriers were the belief that their situation was not severe enough (55%) and feelings of shame about seeking help (47%) (CMA, 2022). Additionally, physicians often worry that others will interpret their need for support as a sign of weakness or incompetence (Wallace et al., 2009).

Similar barriers have been observed across other health professions. Research by Bourgault et al. (2022) showed that stigma is a major obstacle to accessing mental health support for nurses, midwives, and dentists as well. While financial support and encouragement from colleagues or supervisors can facilitate taking leave for mental health reasons, unsupportive supervisors, inadequate workplace accommodations, and poor organizational policies frequently hinder the return to work. The study found that nurses and midwives, who are predominantly women, were more likely to experience mental health issues and take leave, while dentists and physicians, with more balanced or masculine gender profiles, were less likely to do so. Therefore, organizations should develop targeted strategies that address the specific stressors and barriers faced by each profession and ensure that support systems are sensitive to gender differences (Bourgault et al., 2022).

Fear of Discipline

Health professionals may be deterred from seeking help for physical health, mental health, or substance abuse concerns because they fear real or perceived consequences for doing so (Akoo, et al., 2023; DiLalla et al., 2010; Wallace et al., 2009). For example, many medical licensing applications include

questions that ask about the applicant's physical health, mental health, and substance use. Some licensing boards undertake investigations if physicians seek treatment, which can lead to sanctions irrespective of whether there is any evidence of impaired functioning, the received treatment was effective, or the diagnosis had an effect on their professional skills and abilities (Wallace et al., 2009). This underscores an important consequence of stigmatization with respect to physician health.

Access

The literature suggests that many health professionals lack access to high-quality, confidential mental health and substance use care. For example, only about half of practicing physicians say that their current workplace offers at least one wellness support and about a third state they have access to psychological support at work (CMA, 2022). While accessibility is slightly better for medical residents, where 75% say their current workplace offers at least one wellness support (and 58% of medical residents have access to psychological support), many residents and physicians are without access to psychological and wellness supports. Further, while many organizations have crisis counselling, long-term counselling options are often limited, especially in rural areas (Health Canada, 2023).

Additionally, research among nurses demonstrates that barriers extend beyond service availability to include organizational and systemic obstacles to taking a leave of absence for mental health reasons such as being denied access to leave even when experiencing psychological distress (Akoo et al., 2023)

Time

Health worker capacity has been identified as a significant barrier to accessing wellness support and services (Akoo et al., 2023; CAHS, 2023). A lack of time, heavy workload, stressful work environment (60%), and challenges arising from scheduling are cited as the most common barriers preventing respondents from maintaining a healthy lifestyle (CMA, 2022). Having no time (55%) was the highest-rated barrier for physicians seeking wellness support (CMA, 2022).

4.3.2 Strategies for Supporting Mental Health and Reducing Stigma

Offer Structured Wellness Programs

A national inventory of Canadian emergency department wellness interventions found that seven out of 13 initiatives targeted multiple healthcare worker groups, including physicians, nurses, respiratory therapists, social workers, and support staff (Liu et al., 2025). The review found that all interventions that involved formal wellness curriculum resulted in a significant improvement in wellness and decreased burnout, and those that incorporated mentorship, communication, and personalized one-on-one support addressing specific aspects of burnout tended to yield positive results. However, those that focused on organizational changes alone, such as shift re-design were inconclusive (Liu et al., 2025).

Similarly, a systematic review of interventions to improve physician wellness found that although the types of interventions varied widely, they could be grouped into four main categories: educational curricula, physical activities, administrative policies, and social aspects (Kolobaric et al., 2025). Among these, interventions focused on wellness education and physical activity were generally the most effective, with most studies in these areas showing positive results. In contrast, administrative

interventions were found to be the least effective. The authors suggested that physical activity programs may help improve physician wellness by increasing energy and reducing the risk of chronic diseases, while educational interventions provide physicians with the knowledge and skills needed to manage stress and achieve a healthier work-life balance (Kolobaric et al., 2025). These findings are supported by a recent Canadian study of two medical schools which found that higher levels of light physical activity and lower levels of sedentary behaviour are significantly associated with reduced burnout among medical students, suggesting that integrating movement behaviour competencies into medical curricula could address burnout among medical students (Morgan et al., 2024).

Encourage Self-Care

Many personal coping skills have been adapted from other research related to stress, coping, and mental health. Coping skills and strategies that have been shown to support mental health include the following:

- Changing work patterns such as working less, taking more breaks, avoiding overtime work, and balancing work with the rest of one's life (Maslach & Leiter, 2016).
- Developing coping skills such as cognitive restructuring, conflict resolution, and time management (Bynum, 2024; Maslach & Leiter, 2016).
- Obtaining social support from colleagues and family (Maslach & Leiter, 2016; Wallace et al., 2009).
- Utilizing relaxation and mindfulness strategies (Alkhawaldeh et al., 2024; Maslach & Leiter, 2016).
- Promoting good health and fitness (Bynum, 2024; Maslach & Leiter, 2016; Morgan et al., 2024).
- Developing a better self-understanding through various self-analytic techniques, counselling, therapy (Alkhawaldeh et al., 2024; Maslach & Leiter, 2016).

Encourage Supportive Relationships

Health organizations can significantly enhance the mental health and well-being of their workforce by encouraging preceptors, mentors, advisors, and supervisors to demonstrate genuine empathy, be non-judgmental, and model vulnerability. These relationships help create a supportive environment where health professionals feel comfortable disclosing mental health concerns (DiLalla et al., 2010). Regular check-ins with health professionals, where leaders convey support and compassion, are crucial. Simple yet meaningful questions like, "What can I do for you right now?" or "What was the hardest part of your day?" can make a significant difference in helping health professionals feel connected and supported (Office of the U.S. Surgeon General (OUSG), 2022).

Leaders at all levels play a pivotal role in fostering a culture that recognizes and addresses mental health concerns. According to Shanafelt and Noseworthy (2017), when organizational leaders openly discuss mental health issues and actively listen to their staff, it signals that these concerns are recognized at the highest levels. This, in turn, builds trust and encourages physicians and other health professionals to seek mental health support. Leaders can use various formats—such as town halls, letters, video interviews, and face-to-face meetings with clinical divisions and work units—to discuss mental health

and well-being with their staff (Shanafelt & Noseworthy, 2017). Additionally, leaders should be well-versed in Employee Assistance Programs and other mental health services, promoting these resources to their teams as valuable support systems (OUSSG, 2022).

Encouraging vulnerability and open communication around mental health and substance use is vital in promoting a culture where seeking help is seen as a strength. Informal peer support plays a crucial role in this, encompassing activities like celebrating personal and professional achievements, supporting each other through challenging experiences such as patient loss or medical errors, and sharing strategies for navigating the complexities of a medical career (OUSSG, 2022; Shanafelt & Noseworthy, 2017). Peer support is essential in helping physicians manage professional challenges and feel more comfortable disclosing mental health concerns (DiLalla et al., 2010).

Moreover, formalizing peer support can further strengthen this culture of support. For example, the Mayo Clinic's Peer Support Panel serves as a confidential resource for health professionals, offering assessment and support through private meetings with respected colleagues (Shanafelt et al., 2017). Minimal notes are taken to ensure confidentiality, and those in need of further assistance are connected to appropriate resources. Shanafelt et al. (2017) found that this program has been instrumental in preventing silent suffering among organizational members.

Reduce Stigma through Organizational Structure and Design

Integrating peer support and mental health services into functions that are not directly associated with mental health can help reduce stigma and increase accessibility. For example, at Stanford, the peer support function is located alongside the financial planning department rather than near areas related to mental health services like psychiatry or human resources, where disciplinary activities occur (Shanafelt et al., 2017). This strategic placement helps minimize stigma while increasing awareness and utilization of peer support services, as nearly 75% of physicians interact with the financial planning department annually (Shanafelt et al., 2017).

Creating sustainable, supportive spaces is another effective strategy that can provide valuable respite and a supportive network for individuals facing professional and personal challenges. Reintroducing the doctor's lounge, for instance, has been suggested to address physician well-being challenges (Do et al., 2023). Similar community-building spaces, such as learner lounges, should be considered in the design of physical spaces to foster connectedness and a sense of community among health workers. Additionally, adopting the role of Chief Wellness Officer can support health professionals by focusing on protecting clinicians from occupational distress, which, in turn, supports their ability to deliver high-quality care and sustain a fulfilling career (Do et al., 2023).

Expand and Facilitate Access to Supportive Resources

By establishing mental health services that are safe and confidential, organizations can encourage greater utilization and support (Maragha et al., 2024). To safeguard clinicians' privacy and foster trust, organizations must implement data collection and management strategies that protect health information and be transparent about how this data is used (NAM, 2019). This includes ensuring that mental health and peer support services remain independent from disciplinary processes. Organizations should eliminate any punitive policies related to seeking mental health and substance use care, ensuring that access to these services is voluntary and not influenced by supervisory pressures (NAM, 2019).

Organizations should strive to increase access to timely and effective health and wellness support by providing protected time for employees to access Employee Assistance Programs and other mental health services while reinforcing the confidentiality of these services is also important (OUSSG, 2022). This can include deploying a float team of mental health clinicians to offer flexible care models, such as telemedicine and virtual care, after working hours and embedding mental health professionals on units as liaisons (Do et al., 2023; Health Canada, 2023; OUSSG, 2022; Shapiro et al., 2019).

Additionally, offering evidence-based training and practices that support the prevention, early intervention, and treatment of conditions like burnout and mental health challenges is essential (OUSSG, 2022). Regularly assessing staff mental health and their willingness to utilize support systems, such as EAPs, will help organizations tailor their resources to meet the needs of their workforce better (Do et al., 2023).

Review and Implement Federal and Provincial Policies to Support Mental Health

It has been recommended that the federal government offer direct funds to health providers as well as direct funds to the provinces and territories for mental health resources (HealthCareCAN, 2022; CAMRT, 2022). Examples of these resources can be found across Canada. In Ontario, the Centre for Addiction and Mental Health (CAMH) provided support for health professionals and students through the Extension of Community Health Outcomes (ECHO) Coping with COVID program (CAMH, 2017, as cited in CAHS, 2023). Similarly, British Columbia has a new provincial health workforce wellness team to support and supplement existing mental health resources for health professionals (Government of British Columbia, 2022, as cited in CAHS, 2023).

The federal government should also invest in programs and resources to help improve the mental health and wellness of health professionals. Increasing programs geared specifically to help health workers through psychotherapy needs assessments, peer support, and workplace mental health training and intervention services are only some of the resources that would help them maintain their mental health and well-being (HealthcareCAN, 2022).

Provincial legislative bodies should create legal protections that allow clinicians to seek and receive help for mental health conditions and to deal with the unique emotional and professional demands of their work through employee assistance programs, peer support programs, and mental health providers without the information being admissible in malpractice litigation (NAM, 2019). National Academies of Medicine (2019) has also recommended that licensing boards, health system credentialing bodies, disability insurance carriers, and malpractice insurance carriers either not ask about clinicians' personal health information or else inquire only about clinicians' current impairments so that health workers are not deterred from seeking mental health and substance use care (NAM, 2019).

4.3.3 Gaps & Limitations

The evidence on mental health and stigma and related interventions included in this review face several design-related limitations. Common issues include heterogeneity of interventions and outcomes where interventions target different populations using diverse methods, lack of standardized outcome measures (e.g., Maslach Burnout Inventory) and cross-sectional designs (e.g., Brazeau et al., 2014), which capture data at a single point in time and may not reflect changes over time (Liu et al., 2025;

Kassam et al., 2024; Kolobaric et al., 2025;). Low response rates (e.g., DiLalla et al., 2010; Kassam et al., 2024), unrepresentative samples (CMA, 2018) and narrow scope of intervention studies (e.g., single institution or demographic) further constrain the applicability of the results.

4.4 Engage Effective Resources to Minimize Administrative Burden

Invest in staffing and human resources to alleviate the administrative burden placed on health professionals, increasing the amount of time available for patient and client 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.

This section analyzes 25 sources to highlight the prevalence, impact and causes of administrative burden in the health care system. It also provides strategies and solutions for reducing administrative burden and improving efficiency. The gaps and limitations of the available evidence are also discussed.

4.4.1 Prevalence and Effects of Administrative Burden

Administrative burden is an area of concern within the health workforce, affecting multiple sectors and comprising a notable portion of health workers' time. Estimates from various sources in Canada indicate that physicians spend approximately 10 hours per week (CMA, 2022), up to two hours for each patient (Tajirian et al., 2025), 48.8 million hours annually (CIHI, 2023), and as much as 30% of their work hours on administrative tasks (Casey, 2023). Provincially, physicians in Nova Scotia reported spending about 10.6 hours weekly or 500,000 hours per year on these tasks (Office of Regulatory Affairs and Service Effectiveness (ORASE), 2024). Furthermore, family, rural, younger, female, and racialized physicians tend to spend more time on administrative duties compared to specialist, urban, clinic, and hospital-based male physicians (Doctors Manitoba, 2024a).

While technology has enabled continuity of care, flexibility, and access to new populations for social work and mental health professionals, it has been associated with higher cognitive load, emotional strain, physical discomfort (like eye strain and neck pain), and workflow disruptions (Hilty et al., 2023). Additionally, mental health professions have reported more distractions, as well as reduced interpersonal cues and greater effort needed to build therapeutic relationships compared to in-person care (Hilty et al., 2023).

The administrative burden placed on health professionals has a profound impact on both workforce well-being and the overall efficiency of health service delivery. Excessive administrative tasks hinder recruitment and retention efforts within the workforce (Casey, 2023; CMA, 2022; CIHI, 2023) and are a major contributor to burnout among health professionals (Drummond & Jones, 2023; Hilty et al., 2023; Tajirian et al., 2025). At the point of care, this burden forces health workers to spend less time with patients, leading to service delays and heightened risks to patient safety (Casey, 2023; Hilty et al., 2023). By reducing the time spent on administrative duties and reallocating those hours to direct patient care, the health workforce could achieve a 10% increase in patient rosters and boost primary care coverage from 78% to 85% (Drummond & Jones, 2023).

4.4.2 Causes of Administrative Burden

Inefficient Technological Design

Technology has the capacity to improve the way the health system functions and alleviate the administrative burden on health professionals (Hilty et al., 2023; Itchaporia, 2021). However, it also has the potential to exacerbate administrative burden if systems are poorly designed and difficult and time-consuming to use (Hilty et al., 2023; Itchaporia, 2021).

The leading contributors to administrative burden include pop-up messages that interrupt workflows, platforms that require excessive mouse clicks to carry out a task, programs that lack visualizations for ease of navigability, and overly complicated or manual systems (OUSSG, 2022). Forms that are neither standardized nor harmonized, the “log-in” burden that results from relying on multiple platforms, and common IT-related concerns such as hardware and WIFI failures were also identified as burdensome (Casey, 2023; CAHS, 2023; Doctors Manitoba, 2024a; Hilty et al., 2023). In some cases, the technology itself is less important than the burden of having to learn yet another system (Thomas et al., 2021).

Lack of System Interoperability

A lack of systems interoperability is especially burdensome for practitioners (CIHI, 2023; CMA, 2024; Doctors Manitoba, 2024a). Among Canadian family physicians, although 89% of primary care physicians send patient information to specialists, only about half receive information back on changes made to the patient care plans and medication. This breakdown in information sharing impedes family physicians’ ability to coordinate and provide effective care (CIHI, 2023). The absence of a clear regulatory authority over systems interoperability exacerbates these challenges, as there is no ability to standardize and enforce information sharing (CMA, 2024).

Lack of Practitioner Input

According to Thomas et al. (2021), new technologies may not decrease administrative burden as effectively as improved technologies. Including input from practitioners in the design process ensures that both practitioner and patient needs are considered and helps minimize the time required to learn new systems (CAHS, 2023; CMA, 2024; Hilty et al., 2023). For instance, electronic medical records developed without practitioner involvement can result in increased frustration, workload, and decreased autonomy among practitioners (CAHS, 2023; CMA, 2024).

Workflow Obstructions

Workflow-related contributors include duplicative tasks, failure to delegate tasks, and treating physicians as ‘gatekeepers’ of important documents (Casey, 2023; CAHS, 2023; Doctors Manitoba, 2024a; Hilty et al., 2023).

4.4.3 Strategies for Reducing Administrative Burden

Develop Efficient Technological Solutions

Technological solutions should prioritize enhancing efficiency and reducing the time spent on administrative tasks. This can be achieved by minimizing the number of clicks required to complete tasks, designing intuitive and efficient platforms (Thomas et al., 2021), providing mandatory system training where necessary (Hilty et al., 2023; Thomas et al., 2021), and ensuring that technological failures are addressed quickly (Hilty et al., 2023; Shapiro et al., 2018). One potential improvement is the implementation of proximity cards for computer sign-on, which have been demonstrated to reduce excessive logins and save health workers approximately 30,900 hours annually (ORASE, 2024).

Health information management systems can be enhanced by incorporating platforms that allow for effective communication of test results to patients, tracking and following up on high-risk laboratory results, and directing appropriate actions based on these results (Khatami et al., 2024). The integration of speech recognition systems to assist with physician notetaking may help reduce the perceived workload (DeChant et al., 2019; Thomas et al., 2021) in addition to algorithms automating the compilation of electronic medical records (Arslan et al., 2024). However, it is crucial to ensure the accuracy of these systems (Doctors Manitoba, 2024a).

Strengthen Interoperability of Systems

Integrating health systems and strengthening the interoperability of existing systems is key to reducing administrative burden (CIHI, 2023; Doctors Manitoba, 2024a; Khatami et al., 2024; OUSSG, 2023; Thomas et al., 2021). The interoperability of health information systems can improve the quality of care by reducing the cognitive workload on health workers, increasing system efficiency, and reducing patient risk due to inaccurate information (Khatami et al., 2024). This includes efficient booking and scheduling systems that are interoperable with electronic medical records and physician-pharmacist communication platforms (Khatami et al., 2024) and greater interoperability to facilitate practitioner collaboration and access to patient medical records (OurCare, 2024; WHO, 2022b).

Standardized health information systems are needed to facilitate a pan-Canadian data-sharing platform with the necessary privacy provisions, enable document harmonization and centralization, and negate the need for duplicative efforts (CAHS, 2023; Thomas et al., 2021). This should be overseen by a clear authority to support and enforce information standardization and sharing (CMA, 2024). However, it is important to balance interoperability with the needs of specialty clinics and roles, otherwise, the lack of customizations can exacerbate the burden (Health Canada, 2023; Thomas et al., 2021).

Policy and regulatory changes should be developed to support data sharing through coordination across different levels of the health system, and careful consideration of the impacts on health workers should be taken into account (Health Canada, 2022; Health Canada, 2023). National guidelines and clinical decision support systems should be established to minimize unnecessary or duplicated procedures (Casey, 2023). Regular reviews of laws, regulations, and standards ensure alignment with technological advancements and the evolving needs of health workers (NAM, 2019), including collaboration with regulatory bodies to help limit low-value documentation requirements, streamline processes, and reduce the burden on health workers (Shanafelt, 2021; WHO, 2022b).

Co-Develop Health Information Systems

To alleviate the administrative burden and increase efficiency, co-develop or co-improve administrative systems in collaboration with the health workers who use them (CMA, 2024; Health Canada, 2023; Hilty et al., 2023; Tajirian et al., 2025) to identify the main sources of overload, clinical decision complexity, and interruptions to improve systems. Co-development can, in appropriate circumstances, include patient populations to ensure inclusive, accessible designs that are easy to use (NAM, 2019; OUSG, 2022). Co-development of health information systems must actively involve Indigenous communities to ensure their perspectives and needs guide decisions about their health data (CMA, 2024). To support any collaborative approach, education on digital health tools would be needed for both physicians and patients to empower them to make informed choices and contribute meaningfully to system improvements (CMA, 2024).

Adopt a Burden Reduction Lens for New Policies

Adopt a burden reduction lens when developing any regulatory or policy change involving the health workforce. Every administrative solution should either decrease or at least maintain the current workload on physicians (Doctors Manitoba, 2024a), minimize adverse effects, and maximize positive change (NAM, 2019).

Monitor, Evaluate, and Continuously Improve

Allocate the necessary resources to assess the effects of regulations, policies and standards on clinicians before and after their implementation (NAM, 2019; Shanafelt, 2021). This approach ensures that any adverse effects can be identified and addressed. Furthermore, the development of quality metrics to assess documentation practices can help maintain a focus on continuous improvement, ensuring the reduction of administrative burdens remains a priority over time (Health Canada, 2023).

Leverage Teamwork & Task Shifting

The most effective interventions for reducing administrative burden are those that directly address workflow inefficiencies within clinical teams (Thomas et al., 2021). One key approach is to reduce the time physicians spend on administrative tasks by delegating these responsibilities to other capable roles, such as scribes and medical assistants (CAHS, 2023; DeChant et al., 2019; Sinsky & Panzer, 2022; Thomas et al., 2021). Additionally, introducing team communication strategies can help foster more supportive and appreciative workplace cultures, which in turn can reduce burnout. For instance, providing physicians and other practitioners with time to share experiences and insights and pursue formal and informal professional development opportunities can contribute to a healthier work environment and better patient outcomes (Awuku et al., 2025; DeChant et al., 2019).

Optimize the Workforce

To optimize healthcare team efficiency, identify the most appropriate tasks for each member of the team—such as nurses, occupational therapists, physicians, chiropractors, and personal care workers—and ensure they receive the necessary support to focus on these roles effectively (Health Canada, 2023; Canadian Chiropractic Association, 2022). Limiting work hours and enhancing communication between team members should also be considered while ensuring that reduced work hours do not lead to the

same workload being compressed into less time (DeChant et al., 2019). Dedicated funding for hiring additional clerical staff is essential to support primary health teams with their administrative processes (Casey, 2023). Furthermore, mandating adequate nurse-to-patient ratios can significantly enhance the efficiency and effectiveness of healthcare teams (Duong & Vogel, 2023).

Co-Develop Workflow Solutions

Designing workflow solutions in collaboration with practitioners is crucial for appropriately matching their skills to tasks and laying the groundwork for more permanent policy and technological changes (Hilty et al., 2023; Thomas et al., 2021). Since practitioners are typically aware of existing workflow inefficiencies and tasks that do not require their expertise, they can provide valuable insights for effective workflow revisions (Doctors Manitoba, 2024b; Health Canada, 2023). Furthermore, integrating patient feedback into workflow solutions is important, as patients can often identify aspects of care that are redundant or contribute little to no value (Sinsky & Panzer, 2022).

4.4.4 Gaps & Limitations

There are several limitations to the available research on reducing administrative burden. For instance, there are relatively few studies from Canada, and many of the studies that do exist are of low quality, with most being too specific to allow for meaningful comparisons (DeChant et al., 2019; Thomas et al., 2021). Few studies have focused on the impact of electronic medical records or explored promising improvements despite the significant impact electronic medical records have on administrative tasks (CAHS, 2023). Furthermore, health professionals did not always contribute to the recommendations for administrative solutions, which may limit their applicability (Casey, 2023). To strengthen these recommendations, more high-quality Canadian research across different healthcare settings is needed, particularly studies that address the challenges and potential improvements related to electronic medical records.

4.5 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.

This section examined 42 sources to identify the key challenges and solutions for creating a sustainable and resilient health system that supports well-being. The gaps and limitations of the available evidence are also discussed.

4.5.1 Health System Challenges that Influence Well-being

Jobs with High Demand

Burnout is a syndrome resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: 1) high emotional exhaustion or feelings of energy depletion; 2) increased mental distances from one's job, or feelings of negativism or cynicism related to one's job; and 3) a low sense of accomplishment or a sense of ineffectiveness (NAM, 2019; WHO, 2022a).

Currently, many health professionals face overwhelming job demands, including increased workloads, time pressures, technological challenges, moral and ethical dilemmas, and work inefficiencies like administrative burdens and inadequate technology usability (CAHS, 2023; Blue et al., 2022; Djukic, 2021; Sheekha, et al., 2024; Wilke, 2024; Darling et al., 2023; Hilty et al., 2023; Negura et al., 2022). Work overload is a significant predictor of burnout, with the risk being up to 2.90 times greater for those experiencing heavy workloads, and it also increases the likelihood of intent to leave by up to 2.10 times (Rotenstein et al., 2015).

Midwives and social workers are examples of two health professions with high demand roles. Table 1 summarizes the similarities in findings of factors that influence psychological distress and burnout among these healthcare providers (as reported in Negura et al., 2021 and Darling et al., 2023). Many of these factors were reflected in long-term care aids (Duan et al., 2025), nurses (D’Alessandro-Low et al., 2024), and other health professionals (Rubin et al, 2021; Sheekha et al., 2024; Hancock et al., 2020).

Table 2. Comparison of Professional Distress: Healthcare Social Workers and Midwives

Theme	Midwives	Social Work
Work–Life Imbalance	Unpredictable on-call shifts and overtime where work intrudes into personal time, causing emotional exhaustion, sleep disturbances, and guilt.	Lack of flexibility and on-call models negatively impacts mental health and work-life balance; “all or nothing” caseloads
Organizational Constraints	Power dynamics within practice groups, lack of transparency, and feeling powerless to advocate for themselves are significant stressors. Organizational culture and funding structures can undermine autonomy and contribute to distress	Feel powerless due to limited resources, rising inequalities, and systemic limitations. Witnessing welfare gaps and managing overwhelming caseloads without adequate support
Unrealistic Workplace Expectations	High expectations for availability and performance, limited flexibility, and pressure to meet unattainable targets	Expected to solve complex problems quickly with insufficient time and resources; unrealistic administrative demands and high caseloads
Lack of Recognition & Misrepresentation	Lack of public and professional respect, invisibility, and misrepresentation of their role. Disrespectful behaviour, bullying, and discrimination (including racism, ageism, and homophobia)	Lack of recognition from administrators, colleagues, and service beneficiaries. Their expertise is undervalued, and their role is poorly understood within healthcare teams.
Exposure to Trauma & Compassion Fatigue	Trauma from critical incidents and challenging cases; lack of trauma-informed support	Regular exposure to human suffering, vicarious trauma, and compassion fatigue; internalizing client suffering and responsibility for systemic shortcomings
Professional Identity & Culture	Professional culture encourages self-sacrifice and discourages prioritizing personal wellbeing.	Distress is deeply tied to professional identity and the values of compassion and advocacy.

Insufficient Resources

Insufficient job resources and supports contribute significantly to burnout. Health workers who lack control and autonomy over their jobs, peer and supervisor support, and sufficient staffing and administrative support are at a higher risk of experiencing burnout (CAHS, 2023; Djukic, 2021; NAM, 2019; Neufeld et al., 2025; Akoo et al., 2024; Jelen et al., 2024). For instance, hospital pharmacists reported being assigned numerous nonclinical duties without adequate administrative support, preventing efficient workflows and contributing to a diminished sense of personal accomplishment (Blue et al., 2022). Registered nurses and other health professionals reported their stress is related to not having enough staff, leading to overtime, and denial of time off (Akoo et al., 2025; Jelen et al., 2024).

Inadequate Preparation

Health professionals who feel unprepared for their role are more likely to experience decreased well-being as a result (CAHS, 2023). For example, long-term care staff that completed online burnout prevention modules experienced small to moderate decreases in burnout and secondary traumatic stress compared to those who perceived their training as inadequate were more likely to experience burnout and post-traumatic stress symptoms (Puyat et al., 2023). A separate survey found that oncologists who did not have sufficient communication skills had substantially worse well-being outcomes than their colleagues who felt as though they were adequately trained (Shanafelt, 2005).

Remuneration

Many health professionals are motivated by rewards, but incentive structures based on productivity can have unintended negative consequences. When practitioners are incentivized to see more patients or perform more procedures, they may shorten the time spent with each patient, order more tests or procedures, or work longer hours. These strategies can compromise the quality of care and, in the case of longer work hours, increase the risk of physician burnout, making the approach ultimately self-defeating (Shanafelt & Noseworthy, 2017).

On the other hand, dissatisfaction with pay or the perception that compensation does not adequately reflect work demands, responsibilities, or the challenges of work-family conflict can lead health professionals to consider leaving their jobs (Adams et al., 2021; Halter & Boiko et al., 2017; Yong et al., 2020 as cited in CAHS, 2023). Thus, while compensation structures can contribute to burnout, they also play a crucial role in influencing health professionals' decisions to stay or leave their positions. This highlights the need for balanced compensation strategies that motivate without leading to burnout or turnover.

4.5.1 Strategies for Institutionalizing Well-Being as a Long-Term Value

Invest in Health Workforce Well-being

Governments at all levels must significantly increase their investments in the mental health and wellness of health workers (CAMRT, 2022; Darling et al., 2023; HealthCareCAN, 2022). Dedicated funding for both research and programming aimed at improving the mental health of health professionals is needed. This includes expanding access to programs that support health professionals, such as psychotherapy,

needs assessments, peer support, and workplace mental health training. Interventions may include online modules (Puyat et al., 2023) and structured wellness curriculums that offer opportunities for collaboration between trainees and staff, foster social connections, provide experiential sessions, and promote guidance from mentors and role models (Liu et al., 2025; Mulherin, n.d.a). Such initiatives would help health professionals maintain or improve their mental health and well-being, which is essential for sustaining a resilient and effective health workforce (HealthCareCAN, 2022).

Assess and Limit Workload and Increase Control

Research highlights that standardized methods for managing workload and enhancing employee control over their work can help mitigate burnout and reduce turnover intentions (Neufeld et al., 2025; Rotenstein et al., 2015; Shanafelt & Noseworthy, 2017). Organizations should consider strategies such as adjusting patient-to-physician ratios, increasing medical rounds teams, developing float pool teams to alleviate work overload (Thomas Craig et al., 2021), and providing flexible work schedules to help balance personal responsibilities with work efforts (Darling et al., 2023; de Wit et al., 2024; Shanafelt & Noseworthy, 2017; Yuan et al., 2023). For example, providing formal and transparent frameworks for leaves of absence can mitigate burnout and attrition (Thiessen et al., 2024).

Furthermore, expanding the role of nurse practitioners by enhancing their scope of practice could further optimize their contribution to the health system and address workforce challenges (Drummond & Jones, 2023). Although Canada has a growing number of nurse practitioners, their current numbers are still insufficient compared to the demand (Drummond & Jones, 2023).

Design Organizations to Support Well-being

To effectively institutionalize well-being within organizations, several organizational design strategies should be considered. First, establishing a dedicated leadership role focused on professional well-being is essential. This leader and their team should coordinate across all organizational programs, particularly those related to patient care quality, safety, and occupational safety (CAHS, 2023). Supporting this role by embedding change agents within each work unit can further promote well-being at a local level. Successful models include formal titles like Department Well-being Director, as used by Stanford Medicine, or less formal roles such as Wellness Champions. However, formal appointments combined with designated protected time are generally more effective (Shanafelt et al., 2015).

Additionally, organizations should ensure that executive and board leadership prioritize and continuously improve the work environment. Governing boards must hold organizational leaders accountable for fostering and maintaining a positive and healthy work atmosphere (CAHS, 2023). This comprehensive approach helps embed well-being into the organizational culture and supports sustained improvements in professional satisfaction and performance.

Encourage Appropriate Leave Time

Attendance and leave policies should be reviewed and adapted to enhance flexibility and accommodate individual circumstances, thereby supporting overall health and well-being (Do et al., 2023). It is important to ensure that employees are fully informed about any new policies and their implications to ensure they are implemented effectively (Do et al., 2023).

Nurses, regardless of their tenure, should have equitable opportunities to take vacation time when desired (Health Canada, 2023). To facilitate this, organizations could consider adding capacity through measures such as implementing vacation relief float teams. These teams consist of permanent employees who can work across different units, providing coverage during peak vacation periods (Health Canada, 2023). Additionally, offering paid clinical externships for students can provide exposure to various nursing units and teams while also adding extra capacity to the organization during busy times. Furthermore, midwives should be provided with flexible work options that, for example, reduce time on-call time (Darling et al., 2023). These strategies can help ensure that health workers can take necessary leave without compromising service delivery.

Support Professional Growth and Development

Professional growth and development are key to well-being and job satisfaction. Career growth, training, and promotional opportunities support health workforce retention (CAHS, 2023; Jelen et al., 2023). To maximize effectiveness, professional and personal development must be informed by theory and evidence (Do et al., 2023).

Within healthcare settings, career development pathways and progression are often clearer for nurses and physicians than for other health professions (Jelen et al., 2023). Other health professions have reported limited visibility of job opportunities and observed that nurses were favoured for leadership roles despite qualifications, which contributed to perceptions of inequity and reduced motivation. To address these concerns, a structured development framework for health professionals should offer clear progression pathways, transparent access to job opportunities, and regular performance discussions (Jelen et al., 2023).

Developing and implementing formal transition programs for new graduates (or new managers or leaders) that foster the development of critical competencies results in smooth career transitions and feelings of support (Health Canada, 2023). Formal mentorship programs, defined by relationships that are based on collaboration and trust, have resulted in increased retention of nurses and longevity of nursing careers (Health Canada, 2023). It is recommended that mentorship be offered across the scope of nursing careers, be closely integrated with nursing orientation and preceptorship, and be voluntary (Health Canada, 2023; Jelen et al; 2023).

Establish Organizational Strategies to Address Well-being

The actions of health organization leaders significantly impact the day-to-day work environment for health professionals (Shanafelt et al., 2023). Leaders should integrate health and well-being into all organizational policies, culture, and mandates, ensuring that these elements are central to administrative, operational, and academic functions. This holistic approach should be reflected in medical schools (International Conference on Health Promoting Universities and Colleges, 2015) and other healthcare settings through continuous policy reviews and amendments (Do et al., 2023).

The Well-being 2.0 phase represents a comprehensive wellness intervention aimed at addressing the root causes of occupational distress (Shanafelt, 2021). Unlike traditional approaches that focus on mitigating burnout, Well-being 2.0 emphasizes improving systems, processes, teams, and leadership to prevent distress and integrate wellness as a core organizational strategy. This shift involves moving from a return-on-investment mindset to a value-on-investment mindset (Shanafelt, 2021).

To foster health worker well-being, Shanafelt and colleagues (2023) recommend seven organizational steps:

1. Establish a common framework for action.
2. Appoint and support a unit well-being leader.
3. Assess each unit's needs and compare them with benchmarks.
4. Integrate unit-level well-being efforts with the organizational improvement infrastructure.
5. Create consistent structures for well-being interventions.
6. Monitor progress using unit-level metrics.
7. Consider unit perspectives when evaluating organizational progress.

Additionally, Shanafelt and colleagues (2021) outline four fundamental components for a successful well-being strategy:

1. Foundational Programs: Implement effective, evidence-based interventions and best practices.
2. Cultural Transformation: Strengthen organizational culture through deliberate assessments and improvements.
3. Rapid Iterative Experimentation: Pilot and refine new programs based on rigorous evaluations before scaling.
4. Sustainability: Ensure the long-term viability of well-being initiatives.

For meaningful progress, organizations should examine how medical culture has historically allowed harm to persist and address these issues proactively (Siad & Rabi, 2021). Canadian medical schools, professional organizations, and regulatory bodies have made strides in promoting equity, diversity, and inclusion. However, for these initiatives to succeed, they must promote both diversity and genuine collaboration between new and existing members. Crucially, the responsibility for championing equity, diversity, and inclusion should not rest solely on equity-deserving individuals (Siad & Rabi, 2021).

Monitor and Assess to Inform Continuous Improvement

The use of validated measurement tools to assess burnout and well-being as routine performance metrics is recommended. Establishing relevant metrics and goals can enhance accountability to an organization's board and elevate well-being as a priority at all leadership levels (Shanafelt et al., 2015). Data from these assessments should inform strategies to prevent and reduce clinician burnout and improve professional well-being, contributing to a continuous learning and improvement process. Additionally, organizations should share data, results, and efforts internally to foster transparency and collective progress (CAHS, 2023; Shanafelt & Noseworthy, 2017).

Assessments should be conducted at least annually and at regular intervals to effectively measure burnout and well-being (CAHS, 2023; Shanafelt & Noseworthy, 2017). Measurement tools should cover a range of dimensions, including burnout, engagement, professional fulfillment, fatigue, emotional health, and overall well-being and correlate with relevant outcomes such as safety, quality, and productivity, and be supported by national benchmarking data (Shanafelt & Noseworthy, 2017).

Additionally, organizations might implement measures to track after-hours documentation, procedural efficiency (e.g., operating room turnaround times), and teamwork (Shanafelt et al., 2015). Creating a department scorecard to monitor efforts within each unit can also be beneficial. For each domain, using transparent criteria to categorize efforts as beginner, intermediate, or advanced and assessing their effectiveness can help track and improve well-being initiatives (Shanafelt et al., 2015).

Establish Remuneration and Compensation Schemes that Support Retention

Remuneration is critical for the retention of health practitioners, such as nurses and physicians. Higher salaries are associated with increased job retention (Adams et al., 2021, as cited in CAHS, 2023). However, to address the potential drawbacks of productivity-based pay, some organizations have included care-focused metrics, like patient satisfaction and quality measures, in their compensation formulas (Shanafelt & Noseworthy, 2017).

Alternatively, organizations might consider offering non-financial rewards, such as greater flexibility to enhance work-life integration or protected time for activities like quality improvement, community outreach, research, education, or mentorship (Shanafelt & Noseworthy, 2017). These rewards can help physicians align their work with personal and professional goals, potentially leading to greater fulfillment and productivity (Shanafelt & Noseworthy, 2017).

4.5.2 Gaps and Limitations

Given the high prevalence of burnout, effective strategies to address this issue are urgently needed. However, research on the efficacy of various approaches to reducing burnout remains limited, with few randomized control trials and follow-up assessments available (CAHS, 2023; Maslach & Reiter, 2016). It is still unclear whether a combination of strategies or a single, specific intervention is more effective in tackling burnout (Maslach & Reiter, 2016).

Many interventions focus on individual-level strategies to improve personal resilience and coping. While these strategies can be beneficial and play a role in larger organizational efforts, they alone are insufficient for addressing clinician burnout (CAHS, 2023). A meta-analysis found that organization-directed interventions had greater treatment effects compared to individual-directed approaches, indicating that individual-level interventions, such as mindfulness and communication skills, are more effective when supported by broader organizational strategies (DeSimone et al., 2019). Future interventions should integrate person-level approaches with system-level solutions that address work quantity and quality (Khan et al., 2021).

4.6 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.

A total of 29 sources addressed recruiting and retaining a diverse and inclusive health workforce. This section identifies the diversity gaps and barriers to improving diversity and equity within the Canadian health workforce. It also presents strategies for increasing diversity and recruiting, retaining, and

supporting specific population groups. The gaps and limitations of the available evidence are also discussed.

4.6.1 Diversity Gaps in the Canadian Health Workforce

It is widely recognized that the health workforce should reflect the diversity of the population it serves (Shanafelt, 2021; CAHS, 2023). Patients typically interact with health workers in their most vulnerable moments, and a diverse health workforce is more likely to overcome racism and discrimination and provide safe care (CAHS, 2023; Siad & Rabi, 2021). A diverse health workforce also creates a more dynamic learning environment and enhances service delivery (Kelly-Blake et al., 2018, as cited in CAHS, 2023).

The Canadian health workforce currently underrepresents racial and ethnic minorities and individuals from rural and socioeconomically disadvantaged backgrounds (CAHS, 2023). The lack of diversity and equity contributes to inequities in health service delivery, cultural competency, and patient outcomes (CAHS, 2023; Schreiber et al., 2021).

Racialized individuals are especially underrepresented in health organization leadership. Twenty-eight percent of the hospital executives in provinces and territories across Canada (Sergeant et al., 2022 as cited in CAHS, 2023) and more than 40% of regional health authorities and community agencies have no racialized individuals in senior management (Sinha et al., 2013 as cited in CAHS, 2023). Furthermore, Indigenous professors occupy less than 1% of Canadian university leadership positions, though this spans programs outside of healthcare services (Diversity Gap Canada, 2019, as cited in CAHS, 2023). While more standardized race-based health workforce data is needed to understand these outcomes better (CAHS, 2023), ample evidence supports the notion that there are significant diversity gaps in the Canadian health workforce.

4.6.2 Systemic and Organization Barriers to Achieving a Diverse Health Workforce in Canada

Systemic and organizational barriers, such as hiring practices, access to education and training, and discrimination, are key challenges to achieving diversity. Bias in hiring and promotion practices restricts opportunities for underrepresented groups (Balante et al., 2021, as cited in CAHS, 2023). These barriers are often compounded by a lack of targeted recruitment and retention efforts aimed at diverse populations (Siad & Rabi, 2021).

Limited access to quality education and training programs further restricts the pipeline of diverse candidates to health professions. Socioeconomically disadvantaged groups are disproportionately excluded from medical training programs that rely on, for example, the medical college admission test (MCAT) (Ware et al., 2021 as cited in CAHS, 2023). Exorbitant application, tuition, and residency fees further limit diverse applicants (Ware et al., 2021 as cited in CAHS, 2023).

Discrimination in workplace environments contributes to low representation of racialized and gender-diverse groups. Underrepresented groups are more likely to experience workplace harassment (Berlingieri et al., 2022, as cited in CAHS, 2023). Eighty-eight percent of Black nurses (Registered Nurses Association of Ontario, 2022 as cited in CAHS, 2023) and more than 70% of Black physicians

in Ontario have had negative experiences based on their race (Maliwan et al., 2020, as cited in CAHS, 2023). Asian Canadian practitioners reported experiencing heightened discrimination and threats of violence during the COVID-19 pandemic (Shang et al., 2021, as cited in CAHS, 2023). Additionally, 2SLGBTQIA+ health practitioners have reported experiencing harassment and discrimination from fellow practitioners and patients (Eliason et al., 2017, as cited in CAHS, 2023), and witnessed discrimination against 2SLGBTQIA+ patients (Schreiber et al., 2021). Discrimination is associated with heightened emotional and psychological stress, poor mental health, burnout, and adverse physical outcomes (Filut et al., 2020, McKenzie, 2003, Public Health Agency of Canada, 2020, and Vaismoradi et al., 2022 as cited in CAHS, 2023). As a result, disadvantaged groups tend to exhibit higher attrition rates (Filut et al., 2020, Sudol et al., 2021, and Zhang et al., 2020, as cited in CAHS, 2023).

4.6.3 Organizational Strategies for Increasing Diversity in the Health Workforce

Removing structural barriers and developing safe organizational cultures is key to increasing the diversity of the health workforce (CAHS, 2023). Federal and provincial/territorial governments should embed diverse groups in future health workforce planning, fund efforts to eradicate barriers, implement policies and processes to support equity in the workplace and collect data to monitor progress (Health Canada, 2022). This should be achieved through formal statements, action plans, and dedicated resources to cultivating equitable environments (Merry et al., 2021).

Creating culturally safe organizations involves addressing power imbalances by encouraging self-reflection and fostering respectful, trust-based relationships. Leaders and employees must actively work to understand and overcome biases, ensuring that everyone feels valued and respected (CAHS, 2023). This can be achieved through anti-discrimination and bias training (Merry et al., 2021), increasing the representation of diverse practitioners in decision-making roles, introducing upstream recruitment strategies such as employment equity programs (CAHS, 2023; Shanafelt, 2021), and co-designing physical, social, and virtual spaces with diverse stakeholders to foster inclusion and build community (Do et al., 2023). Promoting inclusion and respect also requires implementing safe reporting mechanisms for unprofessional behaviour. These measures help create an environment where all employees feel supported and fulfilled in their roles (Health Canada, 2022; Burns et al., 2021; Siad & Rabi, 2021).

Academic institutions should introduce targeted policies and programs to support the growth of a diverse workforce. For example, academic institutions could extend undergraduate programs for Black and Indigenous students who meet academic requirements to enter medical school without the MCAT requirement (Queen's University Faculty of Health Sciences, n.d., as cited in CAHS, 2023) and implement specialized application streams to increase admission of underserved groups (University of Toronto MD Program, 2023, as cited in CAHS, 2023).

4.6.4 Strategies for Recruitment and Retention of Specific Populations

Indigenous Peoples

Historical and ongoing colonization has created numerous systemic barriers that hinder Indigenous peoples from joining the health workforce. These barriers include racism, discrimination, geographic

isolation, and socioeconomic disparities, all of which limit access to health profession education and training for Indigenous communities (CAHS, 2023). As a result, Indigenous peoples are underrepresented across all health professions, from nursing to dentistry (Taylor et al., 2019, as cited in CAHS, 2023).

To address this, strategies to recruit Indigenous peoples must go beyond general diversity efforts and reflect their right to self-determination as outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007). This means taking a collaborative, Indigenous-led approach to policies and programs that respect Indigenous conceptions of well-being (Tsuji et al., 2023). A distinctions-based lens is also essential, recognizing the unique historical, cultural, linguistic, and epistemological differences between Inuit, Métis, and First Nations peoples (CAHS, 2023).

Government at all levels must respond to the Truth and Reconciliation Commission of Canada's (TRC, 2015) call to increase Indigenous employment in the health workforce by supporting Indigenous-led initiatives in curriculum development, hiring, admissions, and retention strategies (Anderson et al., 2019, as cited in CAHS, 2023). Adequate funding is crucial to prevent the financial and emotional burden, often referred to as the "minority tax," from falling on Indigenous practitioners (Filut et al., 2020; Schilgen et al., 2017, as cited in CAHS, 2023).

At the organizational level, it is important to provide culturally safe environments, professional development opportunities, mentorship, and peer and leadership support. Encouraging teamwork, collaboration, and proper recognition are also key (CAHS, 2023). Additionally, incorporating traditional knowledge roles within healthcare teams can offer greater opportunities for Indigenous professionals and enhance the cultural safety of services (National Collaborating Centre for Indigenous Health, 2023). For example, in rural British Columbia, Indigenous Health Managers have been integrated into operational and medical teams with equal responsibility and accountability in overseeing patient care. Although this model requires further testing and significant financial support, it has already strengthened relationships through its co-development with Indigenous leaders (Healthcare Excellence Canada (HEC), 2024g).

Women

Although most major hospitals across Canada reflect gender parity (Sergeant et al., 2022, as cited in CAHS, 2023), women are underrepresented in leadership roles (Glauser, 2018; Yang, Rhee et al., 2019, as cited in CAHS, 2023) and paid less than men for the same work due to systemic biases (Cohen & Kiran, 2020, as cited in CAHS, 2023).

Women face barriers in advancing to leadership roles due to pervasive gender bias and stereotypes in the health sector (Ayaz et al., 2021; Bucknor et al., 2018; Glauser, 2018, as cited in CAHS, 2023; Billick et al., 2022). Women are more likely to be younger, caregivers of parents or children, and in earlier stages of their career – all of which are associated with higher rates of burnout and lower well-being (CMA 2021), which have been exacerbated by the pandemic (Morgan et al., 2022, as cited in CAHS, 2023).

Addressing inequities, including pay gaps, within health workforce planning policies and strategies (Ayaz et al., 2021, as cited in CAHS, 2023), informed by gender-disaggregated data collection (Gupta et al., 2021, as cited in CAHS, 2023), should be completed at the federal and provincial/territorial levels.

At the organizational level, it is encouraged to implement flexible work policies and parental leave and childcare support to help women balance career and family responsibilities (CMA 2021). It is also suggested that programs specifically designed to advance women into leadership positions, including mentorship and sponsorship, be created and promoted (Billick et al., 2022).

People with Disabilities

Less than 5% of health practitioners in Canada report having a disability, which is among the lowest representation of the working population with disabilities (CAHS, 2023). Ableism is prevalent in health profession groups and discourages people with disabilities from entering or completing education and training (Lindsay et al., 2022, as cited in CAHS, 2023), and is also associated with poorer mental health outcomes (CMA, 2022).

Health organizations should create positive and accommodating work environments that connect students, practitioners, and leaders with disabilities, encourage open communication about disabilities, and provide spaces for safe disclosure (Bulk et al., 2020; Mayer et al., 2023). They should also incorporate policies and strategies to support the understanding that individuals with disabilities have unique needs and require tailored support (Bulk et al., 2020; Mayer et al., 2023).

4.6.5 Strategies for Expanding the Rural and Remote Workforce

Rural and remote communities often lack access to healthcare education and training programs, making it difficult for residents to pursue careers in the health sector. The scarcity of healthcare facilities and job opportunities in rural areas can deter professionals from living and working in these regions. Rural healthcare settings frequently operate with limited resources (Calma et al., 2019, as cited in CAHS, 2023), leading to high workloads and burnout (CMA, 2022), which can make these positions less attractive to potential health professionals. Practitioners in isolated areas are also more vulnerable to mental health challenges owing to the lack of social connection and limited staffing (CMA, 2022).

Federal and provincial/territorial governments should fund programs that support recruitment and retention initiatives and infrastructure improvements to rural healthcare facilities and should encourage collaboration between jurisdictions to share successful initiatives and partner with local organizations to strengthen programs is also encouraged (CAHS, 2023).

Health organizations should optimize the scope of practice of existing professionals (CAHS, 2023) by providing opportunities for rural and remote individuals without medical training to undertake specialist skill development and join the health workforce (HEC, 2024a). This not only strengthens the rural and remote recruitment effort, but it also decreases the workload on other practitioners and can dually increase Indigenous employment (HEC, 2024a).

Additional recommended strategies to support rural and remote health workforce include strategies promoting well-being among existing practitioners through community engagement activities (CAHS, 2023), offering flexible or part-time positions (HEC, 2024a; HEC, 2024f), and longer clinical placements (Abelsen et al., 2022; CAHS, 2023).

4.6.6 Gaps & Limitations

Although the body of literature on developing a diverse health workforce is expanding, there are several significant limitations. One major gap is the lack of information on the experiences of specific groups. Issues related to sex, gender identity, and sexual orientation are underexamined in the literature, as is ageism (Health Canada, 2022; Merry et al., 2021; WHO, 2021); however, ageism has recently been associated with higher levels of burnout, stress, and emotional dissonance, and lower overall wellbeing (Purchase et al., 2024). This underrepresentation makes it challenging to accurately assess the effectiveness of diversity initiatives and to develop targeted strategies.

Additionally, there is a lack of standardized data collection approaches for equity-deserving groups. Ethical data collection methods that are governed by these groups are essential for enabling governments and organizations to quantify workforce shortages accurately and create effective recruitment strategies (Health Canada, 2022). Moreover, research on diversity in the health workforce often focuses on single identity categories, such as race, gender, or disabilities, without considering how these identities intersect. The absence of an intersectional analysis limits the understanding of the compounded experiences of discrimination and exclusion faced by individuals who belong to multiple marginalized groups.

Finally, much of the research on effective diversity strategies is concentrated on short-term, case-specific solutions. For instance, HEC (2024a; 2024b; 2024c; 2024d; 2024e; 2024f; 2024g; 2024h) highlights promising practices for recruitment and retention but notes that these initiatives have typically been tested only in a few clinical or academic settings with a small number of participants. Furthermore, many proposed solutions focus on individual-level changes, such as mentorship and cultural training (Siad & Rabi, 2021), while larger, structural changes are needed to address systemic barriers and create lasting impact.

4.7 Invest in Measurement, Assessment and Research

Determine the most effective measurement and assessment tools for health workforce well-being, burnout, and related metrics and identify key areas of focus for future research to address gaps in knowledge about well-being and burnout.

This section draws upon 36 sources to describe the current gaps and limitations of the available measurements, assessments, and research and offers strategies to improve the evidence base to address health workforce burnout and improve well-being effectively.

4.7.1 Current Gaps in Measurement, Assessment, and Research

Inconsistent Metrics

Current research and data on health workforce well-being and burnout suffer from the misapplication of measurement tools (Dyrbye et al., 2018) or inconsistent metrics and definitions (Kassam et al., 2024; Kolobaric et al., 2025; Liu et al., 2025; Strauss et al., 2016). Well-being and burnout are complex experiences and as a result, authors measure them via several indicators such as quality of life (West et al., 2009), empathy (Thomas et al., 2007), workload (Rosenstein et al., 2015), perfectionism (Hill & Curran, 2015), unprofessional conduct (Dyrbye et al., 2010), and organizational leadership (Dyrbye et al., 2020). They also measure them in limited settings (Billick et al., 2022; DeSimone et al., 2021; DeChant et al., 2019; Fahrenkopf et al., 2008) and on various scales (Shanafelt et al., 2023; Dyrbye et al., 2018). As a result, these varied approaches prevent meaningful comparison and synthesis of findings (Bautista et al., 2023), thereby hindering improvement (Dyrbye et al., 2018).

Limited Datasets

Current datasets and models of health workforce burnout and well-being lack applicability across the health system (CAHS, 2023). Furthermore, most datasets narrowly focus on a few factors of well-being or burnout, overlooking, for example, the social and physical environment and demographic characteristics (CAHS, 2023; Health Canada, 2022) or relying solely on quantitative or qualitative data (CAHS, 2023).

Short-term Studies

Relatively few assessments of health workforce well-being and burnout are longitudinal (deWit, 2024; DiLalla et al., 2024; Eley et al., 2022; Mata et al., 2015; Mayer et al., 2023; West et al., 2011). Most studies are cross-sectional, providing a snapshot of the current state without examining how these experiences evolve over time. More longitudinal research is needed to understand how burnout develops, persists, or resolves in response to various interventions in work and learning environments (CMA, 2018; Brazeau et al., 2014; Kassam et al., 2024; Kolobaric et al., 2025; Liu et al., 2025; Shanafelt et al., 2023).

Underrepresentation of Diverse Groups

Research on burnout and well-being often lacks sufficient focus on diverse subgroups within the health workforce, such as individuals with disabilities or those who identify as 2SLGBTQ+ (CAHS, 2023; Merry et al., 2021). This underrepresentation can lead to a one-size-fits-all approach in interventions, which may not address the specific needs and challenges faced by these groups.

Insufficient Evaluation of Interventions

There is a lack of rigorous evaluation of interventions designed to reduce burnout and improve well-being (Fahrenkopf et al., 2008). Many studies fail to assess the long-term impact of these interventions and/or apply the interventions in a particular setting (e.g., HEC 2024a; 2024b; 2024c; 2024d; 2024e; 2024f; 2024g; 2024h). There is often limited consideration of how interventions can be adapted to different healthcare settings or professional roles.

Lack of Canadian Research

Research on health workforce well-being in Canada is sparse (CMA, 2018). Less than half (41%) of the sources in this review were based in the Canadian context. The CAHS' more extensive systematic review also noted the paucity of national research, with less than 3% of the research reviewed from Canada (CAHS, 2023). Canada's unique health systems and priorities demand more context-specific, actionable research on the health workforce (CAHS, 2023; Health Canada, 2022).

4.7.2 Strategies to Address Gaps in Measurement, Assessment, and Research

Standardization of Well-being and Burnout Metrics

To address inconsistencies in burnout and composite well-being measurements, organizations can develop and adopt a standardized conceptual framework of burnout (e.g., WHO, 2022a), well-being (Bautista et al., 2023; Dyrbye et al., 2018), and their proxies (Strauss et al., 2016) that relies on validated measurement tools (Cook & Beckman, 2006; Do et al., 2023; Dyrbye et al., 2018; NAM, 2024b). These metrics should be comprehensive to capture the multiple dimensions of well-being, such as physical, emotional, mental, and social health, and should be applicable to different health profession roles and settings (CAHS, 2023; Dyrbye et al., 2018; NAM, 2024b; OUSSG, 2022). There is preliminary evidence that streamlining burnout assessments, such as using a condensed, 10-item version of the Copenhagen Burnout Inventory, can alleviate financial and logistical barriers without sacrificing validity (Li et al., 2025). By adopting more practical and efficient measurement tools, organizations can more readily monitor burnout while maintaining the integrity of their evaluations, thereby supporting a more effective response to workforce well-being.

Comprehensive and Multidimensional Datasets

Organizations should collect comprehensive data on well-being and burnout in relation to other demographic, social, and environmental factors to capture the state of the health workforce, align health system priorities, and inform workforce planning (CAHS, 2023; Health Canada, 2022). Collaboration

within and across jurisdictions will expand the availability and actionability of existing data (CAHS, 2023; WHO, 2022b).

Expansion of Longitudinal Research

To better understand the trajectory of workforce burnout, organizations should fund and support more longitudinal studies that track health workers over time. These studies should examine how burnout develops and changes in response to different interventions, workplace conditions, and personal factors (Brazeau et al., 2014; Shanafelt et al., 2023; Kolobaric et al., 2025; Liu et al., 2025).

Inclusion of Diverse Populations in Research

Organizations should ensure interventions are inclusive and effective for all groups by including diverse populations in research strategies and ensuring these groups govern how their data is applied (CAHS, 2023; Health Canada, 2022). This includes considering the unique experiences of specific groups and the experiences of individuals at the intersection of multiple identities (Kassam et al., 2024).

Rigorous Evaluation of Interventions

To assess the effectiveness of well-being and burnout interventions, organizations should implement rigorous evaluation frameworks. These evaluations should not only measure immediate outcomes but also consider long-term impacts and the adaptability of interventions across different contexts. Additionally, interventions should be monitored to analyze trends in usage, experience, and impact (Health Canada, 2023). Organizations can begin by adopting models and leading practices that have proven successful in the short-term or limited settings (HEC 2024a; 2024b; 2024c; 2024d; 2024e; 2024f; 2024g; 2024h) and test them in larger, team-based models of care over longer periods (Health Canada, 2022; OUSG, 2022).

Expand National Research

Investing in more research on health workforce well-being, burnout, and related metrics, specifically in Canada, is recommended (CAHS, 2023). Organizations should consider implementing a Canada-wide data collection approach that can integrate existing data, standardize it for wide application in interventions, and inform workforce planning (Casey, 2023; Harry Cummings and Associates, 2023; Health Canada, 2022; HealthCareCAN, 2022).

5. Implications for NPHWW

5.1 Results of the 2025 Update

The 2025 update added to the thematic analysis, reinforced the validity of the thematic framework established in 2024 and enhanced its practical application across the Canadian health sector. Grounded in the best available evidence from a wide range of Canadian health professions, the framework now offers more robust and actionable guidance for addressing workforce well-being and burnout. These refinements strengthen the relevance and coherence of the key themes identified for the NPHWW priority areas, positioning them as valuable evidence for informing policy, organizational strategies, and frontline practices that support the health workforce nationwide.

5.2 Applicability of strategic priorities within the Canadian context

In 2022, the National Plan for Health Workforce Well-Being (National Plan) in the United States was released with the intent to strengthen the American health workforce's well-being and improve population health. Broadly, this National Plan identifies existing challenges in their health workforce and then proposes strategies to address immediate and long-term needs and mitigate risks (NAM, 2024). Modelled after the priorities identified in the National Plan, six priority areas were identified for the NPHWW in Canada. The thematic analysis validates that the priorities for the NPHWW are relevant and appropriate within the Canadian context.

Overall, the literature included in this review supports the adoption and prioritization of the strategic priorities identified for the NPHWW. Three notable exceptions were identified. First, the strategic priority of "Institutionalizing and Investing in Well-Being as a Long-Term Value" in the National Plan was heavily focused on recovery efforts related to COVID-19 and did not include the term 'invest.' Because the NPHWW will be released five years after the WHO downgraded the COVID-19 pandemic from a public health emergency, the NAM conceptualization of the construct may no longer be as relevant. Instead, it may be worthwhile to direct efforts toward developing systems that are resilient and safeguarding against future public health emergencies and other events that may pose a risk to the health system, such as disruptions influenced by climate change. Additionally, we recommend adding the term 'invest' to emphasize that institutionalizing well-being requires organizations to provide financial support for interventions, ensuring their timely implementation and long-term sustainability. As such, the strategic priority of "Institutionalizing and Investing in Well-Being as a Long-Term Value" was defined as "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."

Secondly, some constructs overlap in the National Plan's conceptualizations of the two priority areas: "Create and Sustain Positive Work and Learning Environments" and "Institutionalize and Invest in Well-Being as a Long-Term Value" was also identified. Namely, the idea of optimizing work environments to foster well-being was captured in both priority areas. Construct overlap is troublesome because it can complicate the interpretation of results and findings and make it difficult to describe and differentiate between each priority area accurately. Further, distinct constructs ensure that each priority area can be accurately measured and evaluated, leading to more meaningful research outcomes.

This work considered the Socio-Ecological Model (SEM) to help delineate boundary conditions for each priority area (Bronfenbrenner, 1994). “Create and Sustain Positive Work and Learning Environments” was revised to centre on individual and interpersonal facets of well-being. At the same time, “Institutionalize and Invest in Well-Being as a Long-Term Value” is concentrated more so on organizational and systemic factors related to well-being. Thus, “Create and Sustain Positive Work and Learning Environments” was defined as “Prioritizing, investing in, and developing individual and interpersonal factors that optimize learning, foster professional well-being, and support quality care.”

Lastly, and relatedly, construct overlap was also identified in the National Plan’s conceptualization of the priority area “Invest in Measurement, Assessment, Strategies and Research.” Specifically, the National Plan called for expanding the communication of existing strategies for the purpose of driving positive change. Given that the other priority areas provide the strategies that would be communicated, addressing this aspect of the priority area introduced too much repetition to be meaningful. As such, “strategies” was removed from the priority area, which is now “Invest in Measurement, Assessment and Research,” and the strategies were evaluated in the context of the priority area they related to.

5.3 Cross-cutting Themes in the Evidence

While the scope of this literature review is large and touches on several different subject areas, several cross-cutting themes emerged that are relevant to all priority areas.

Overcome limitations in evidence by using adaptive and developmental evaluation approaches to support innovation and experimentation.

Current datasets and models of health workforce burnout and well-being may lack direct applicability across the health system (CAHS, 2023). Relatively few assessments of health workforce well-being and burnout are longitudinal (e.g., DiLalla et al., 2010; Eley et al., 2022; Mata et al., 2015; Mayer et al., 2023; West et al., 2011), and there is a lack of rigorous evaluation of interventions designed to reduce burnout and improve well-being (Fahrenkopf et al., 2008) and research on health workforce well-being in Canada (CMA, 2018). Further, many datasets are quite narrow in that they focus on a few indicators and specific populations (CAHS, 2023). To address these limitations, it is suggested that the NPHWW Working Groups consider the practice of rapid iterative experimentation (Shanafelt et al., 2021). Rather than design a program and pursue widespread implementation, organizations should pursue an iterative experimental approach to pilot programs to evaluate their relevance and efficacy to refine interventions to relevant contexts and systems (Shanafelt et al., 2020).

Establish relevant metrics and goals to ensure well-being is a priority.

To ensure accountability and promote well-being as a priority at all levels of leadership, all interventions and strategies must be supported by robust processes for evaluating their effectiveness and impact (Shanafelt & Larson, 2023). Regular, longitudinal assessments of progress towards clearly defined goals are essential, as they help drive continuous improvement across all intervention types and priority areas (Shanafelt et al., 2023). These evaluations should be scheduled at consistent intervals to accurately monitor outcomes and inform future decision-making.

Organization-directed interventions are more effective compared to individual-directed approaches.

While individual strategies can be beneficial and contribute to larger organizational efforts, they alone are insufficient (CAHS, 2023; DeSimone et al., 2019). Individuals' capacity to independently pursue well-being support is limited. Future interventions should integrate person-level approaches within system-level solutions to address concerns effectively (Khan et al., 2021).

Integrate diverse leaders into decision-making roles to increase representation and address systemic barriers.

While different subgroups within the health workforce face unique challenges (CAHS, 2023; Casey, 2023), increasing representation, especially in leadership roles, ensures that strategies and data collection (Health Canada, 2022) are informed by those directly impacted (CAHS, 2023).

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