



23 Resident Wellness and Work/Life Balance in Postgraduate Medical Education

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Executive Summary

Physician sustainability is a significant theme facing the future of medicine in Canada. New generations of physicians anticipate that they will learn how to manage the challenges and stresses of modern medicine while balancing competing demands of a personal life well-lived. Patient safety literature emphasizes the need to ensure physicians develop excellent self awareness and interpersonal and communication skills, while physician health literature emphasizes that these are the areas of greatest vulnerability in the burned out, ill, or impaired physician. Inter-professional education and healthcare workplace-health research emphasizes how essential it is that all health professionals, including physicians, be firmly engaged in efforts designed to sustain their well-being.

This paper, which is based on a detailed literature review and four interviews, highlights particularly hot topics in the area of resident well-being and concludes with considerations for the future of postgraduate medical education in Canada.

The three key messages in this paper are as follows:

1. There is a need for innovative, rigorous curricular design and implementation and learner assessment in physician health, given new competency expectations. This will require the consideration of organizational cultures and elements that contribute to the hidden curriculum, demand collaboration among universities, hospitals and other resident work environments, and involve significant faculty development and support.
2. Postgraduate medical education offices need to establish centres of leadership in education and supports for the prevention, promotion, identification, assessment, and rehabilitation of physician health issues, much like the student affairs offices in undergraduate medicine. These services need to be integrated and coordinated across the physician life cycle from undergraduate medical education through postgraduate and continuing professional development. They will require the collaboration with provincial physician health programs to enable the continued development of essential self awareness and coping skills, facilitate early identification of problems, and initiate appropriate support.
3. The present tension between the self care needs of the resident and the needs of the patient and educational program must be reframed, supported by evidence that links the negative impact of resident distress on academic performance and on patient care and safety, and the potential for improvements in these domains with increased resident well-being.

Background

Physician health, wellness and sustainability are well-recognized and critical components of postgraduate education and training. The Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC) have embedded physician health within the CanMEDS and CanMEDS-FM frameworks and particularly within the Professional role. Programs and centres of leadership for resident wellness are appearing in postgraduate medical education offices in North America, while multiple provincial and national medical organizations have identified this area as a strategic priority (1). This particular commissioned paper is of critical importance to the future of postgraduate medical training in Canada.

Methodology

Literature Review

The review of resident wellness in postgraduate medical education was one of 24 papers commissioned by the Future of Medical Education in Canada Postgraduate (FMEC PG) Project. The literature search for this paper involved the examination of numerous databases including ERIC, MedLine, Ovid, and PubMed. For reasons of currency and accessibility, the limits included articles written in English that were published from 2000 to 2011. Key search terms included resident OR residency AND wellness AND medical OR medicine AND postgraduate AND education; AND organization OR barriers OR training OR residency OR Workforce OR Healthcare OR General OR family medicine OR specialist OR internal medicine OR dual role OR regulation OR stress OR wellbeing OR burnout OR health OR depression OR anxiety OR suicide OR substance abuse OR mental health OR work hours OR duty hours OR fatigue OR professionalism OR resident in difficulty OR remediation OR disruptive behaviour OR resiliency OR health promotion OR disability OR accommodation; AND Canada OR Australia OR Europe OR USA OR UK OR global OR International OR Canadian medical schools OR College of Family Physicians of Canada.

The population selected for this research was postgraduate medical residents, graduate medical education and medical hospitals, with the subject focus of resident wellness. The research identified a number of relevant themes: 1) current factors affecting resident well-being and the impact of resident well-being and distress on personal indicators, academic performance and professional behaviours; 2) the relationship between resident well-being and patient safety; 3) opportunities and challenges in the teaching and learning of physician health competencies in postgraduate medical education; and 4) identification of the need for programs for the support and management of problems in residency.

The literature review is reflective of previous efforts in physician health scholarship. While helpful and valuable, the quality of the current literature is quite poor overall, and does not adequately capture all trends and themes of value to the future of postgraduate medical education.

Grey Literature

An online search was performed of relevant documents from Canadian and international stakeholders including regulatory bodies, physician leadership organizations, provincial housestaff organizations and educators and accreditors. This search provided pertinent information on stakeholder strategic directions, while the literature exemplified how these relate to resident well-being.

Interviews

Interviews were conducted with four key leaders in the field, using a standard set of questions (see Appendix 3). These interviews provided further insight into the opportunities and challenges of incorporating physician health education and programs for the prevention, identification, support, monitoring and rehabilitation of problems in the postgraduate medical education environment. They also identified an additional theme of finding opportunities for integration and collaboration between undergraduate, postgraduate and continuing professional development including provincial physician health programs. The key informants were identified from across the country representing undergraduate, postgraduate and faculty perspectives, national educational organizations and regulatory bodies.

Discussion and Results

Determinants of Health in PGME

Residency is a critical period in the development of a physician's professional identity as trainees transition from the role of learner to physician. In fact, in most provinces in Canada, this role is embedded in their resident-hospital collective agreements as being a dual one of university student and hospital employee. Though residents generally accept this training period as a time of temporary imbalance of professional development at the expense of life balance (2), the postgraduate training period carries unique stressors that can potentially impact residents' personal lives and professional behaviours. Personal stressors include sleep deprivation, time pressures, social isolation, personal relationship strain, high work-home interference and loss of nonmedical grounding activities and identity, all of which may contribute to distress and personal depletion (3). Additional stressors relate to their role as learners and workers within an exceedingly demanding environment where they experience intense work demands but have little autonomy. Environmental stressors include managing challenging patients, dealing with constant exposure to grief and loss, working in a strained hospital system and experiencing difficult work relationships. Intimidation and harassment of learners is ubiquitous, experienced at some point in their training by 93% of a large sample of residents representing 86% of American training programs (4). Perpetrators can include staff physicians, allied health team members, patients or other residents (5).

Emerging trends in the demographics of the current generation of residents highlight unique considerations. Today's residents are older, are more likely to have working partners, and begin their career with more debt than previous generations. They make career choices based on pragmatic factors such as income, working hours, location of practice, job availability for spouses, flexibility and length of training time, with sense of vocation being a less valued consideration than in previous generations of physicians (6). In a study of graduating medical students from 1996 to 2002 that endeavored to understand the influencing factors of residency program choices, controllable lifestyle (defined as personal time away from practice and control of total weekly hours spent on professional responsibilities) had the greatest influence (55%) over income (9%), length of training (4%), and work hours (2%) (7). Today's residents are showing increased interest in locums and multistage medical careers that may involve retraining. As they adapt to evolving personal realities and professional goals, there are significant implications not only for medical education, which may need to adapt to meet the demands of the emerging workforce, but also for health workforce planning.

Disability and accommodation require special attention in postgraduate education. Learning disabilities occur in approximately three percent of medical trainees, in addition to residents with chronic physical and mental illnesses, and many have required accommodations in preclinical education (8). With strong pressures from Human Rights Codes legislation, postgraduate

medical education faces challenges in determining how to best support these learners in the clinical environment where previous accommodation may not be relevant in this context. Programs are being challenged to define essential, non-exemptible competencies and have systems in place to evaluate and support each resident's ability to meet these requirements (8).

Consequences of Resident Distress - Impact on Personal Well-being

Present data on mental health problems in residents and physicians in general has its limitations. Few studies are scientifically rigorous, and most studies have low response rates, rely on self reporting and frequently yield contradictory data (1). Though greater than 80% of residents in a 2005 Canadian study reported good to excellent mental health, almost 30% of all respondents identified that they experienced a mental health problem during their residency (5). Internationally, reported rates of depression in residents vary from 7 to 56% (9) with an overall prevalence higher than in the general population (10). In an Ontario study, anxiety disorders were identified in 12% of 254 family medicine resident respondents (11).

Substance abuse rates in postgraduate trainees are more difficult to determine, with conflicting reports of use lower than (12) and higher than (13) their age-matched peers. There is general agreement that substance abuse rates in resident physicians are under diagnosed (13) and problems with prescription medications such as benzodiazepines and opiates become significant, likely related to ability to prescribe (12). Substance abuse is a common reason for involvement in physician health programs, and though physicians on the whole are less likely to get help, success rates once in treatment exceed those of the general population. Data from the Ontario Medical Association's Physician Health Program, which monitors many physicians with substance abuse and mental health issues, reports an 85% successful treatment completion rate after five years in a monitoring program (1).

Burnout is common in residents, with rates varying from 18-82% in one review from 2007 (14). A recent study of residents in the Netherlands suggests burnout in residents is two to four times more prevalent than in the general healthcare workforce, concluding with the assertion that residents were the most vulnerable of those studied (15). Burnout itself has been associated with poor health, mood disturbances, alcohol abuse and anxiety. The quality of evidence of studies on resident burnout, like much of the literature on physician health, is generally weak to poor with inconsistent findings making it difficult to establish clear indicators that could be used to identify residents at risk.

Suicide rates amongst physicians are reported to be higher than in the general public, 70% higher in male physicians and 2.5 to four times higher in females (1).

Consequences of Resident Distress - Impact on Professional Behaviours and Academic Performance

Physician well-being is a core foundation of professionalism, embedded in the CanMEDS framework as one of three key competencies in the professional domain (16). This can create a conflict as a fundamental tenant of physician professionalism is that of altruism, which in the accepted language of medicine is interpreted as the physician putting the needs of the patient before the needs of self (18, 19, 45). While this altruism may be expected to be with the best interests of patients in mind, paradoxically, it has been demonstrated that physician distress can negatively impact professional behaviours.

Resident distress is associated with poor academic performance and suboptimal patient care (21,10). Distressed residents practice with less empathy and compassion, and commit more medical errors and other preventable adverse events (3, 9, 21). Some have proposed that

reducing stressors of residency may be a necessary step to facilitate the development of professional behavior (19). Studies examining self reported perceived error rates indicate that depressed residents err at rates of 2.22 times greater than non-depressed residents (21). Self reported studies can be influenced by negative self perception and possibly magnified by residents in distress, but recently these observations have been supported by objective evidence. In a study of 123 pediatric residents in the United States (U.S.), medication errors in depressed residents occurred at 6 times the rate of non depressed residents (9). Significantly, the effect of distress on medical error is independent of fatigue (21). In the development of their competency framework for patient safety in 2008, the Canadian Patient Safety Institute made recommendations for the required knowledge, skills and attitudes of healthcare workers to optimize the human and environmental factors related to patient safety. These specifically include understanding factors that affect their personal well-being, the ability to assess personal work-life balance issues and how they affect professional performance and the safety of patients and how to integrate coping mechanisms to mitigate performance risks and ambient conditions in various practice environments (41).

Residents may not recognize the influence of their well-being on their professional behaviours. In a survey of residents in the U.S., “balance between personal and professional life” was rated last among 28 essential characteristics of professionalism (20). Increasing awareness may not improve outcomes either, since burnt out residents may realize their behaviors are inappropriate but feel unable to change. Because these behaviours result from emotional exhaustion and depersonalization and not ignorance, it challenges traditional pedagogical approaches to professionalism education (4). The relational aspect of wellness to medical error has been shown to go in both directions. Self perceived errors were associated with subsequent decreased quality of life, empathy and increased burnout and depression (22).

Effect of Medical Training on Personal and Professional Well-Being

The literature suggests that medical training itself has a negative influence on well-being (17). In one study of family practice residents, it was identified as the single most negative influence on mental health (11). The literature suggests that mental health deteriorates through undergraduate medical training (16). A systematic review of the literature on mental health disorders in young physicians showed a nonstatistically significant trend of increased mood disorders in the first year of medical training, suggesting an increased vulnerability of trainees in transitional years (10) The influence of medical training on professional behaviours is an area of particular concern, as studies indicate that many essential features of professionalism decline with medical training from the undergraduate years through to the end of residency (20).

Duty Hours and Resident Well-being

Adverse consequences of resident fatigue on personal, academic and professional performance have been looked at independently of distress and have been used internationally as justification for significant modifications to resident work hours. The Institute of Medicine’s 2000 U.S. report “To Err is Human” (23) identified resident fatigue as a significant source of medical error and adverse patient outcomes, and led to the Accreditation Council for Graduate Medical Education (ACGME) restricting resident duty hours in 2003 to 80 per week and setting maximum shift lengths. This was updated in the 2008 Institute of Medicine report on resident duty hours, which called for further action to prevent or mitigate resident fatigue, optimize the educational experience for residents and improve patient handover to maximize patient safety. The European Union Working Time Directive in 2009 restricted resident duty hours to 48 to protect their health and safety.

Some of the direct effects of fatigue on resident health and well-being include increased risk of car accidents, needle stick injuries, stress, mood disorders and interference with relationships (24, 25). Performance-related effects include impaired memory, compromised problem solving abilities, impaired fine motor skills and reduction in quality of teaching to juniors (24, 26, 27, 28). The risk of medication and prescribing errors is highest in the most junior physicians in both the United Kingdom and the U.S. (27, 29)

The impact of the ACGME duty hour decision on resident well-being, patient outcomes, and quality of education, has been a popular topic of graduate medical education literature recently, but the results are limited by the quality of the studies. There is good evidence that limiting resident intensive care unit (ICU) shifts to 16 hours from 24 to 30 yielded a significant reduction in medical errors (from 0.69 to 0.33) (24). In a national survey, the Harvard Work Hours Health and Safety Group demonstrated that residents who worked traditional hours had twice the number of attentional failures on overnight duty, made 36% more severe medical errors and nearly six times the number of more serious diagnostic errors than those limited to 16 hours and made 300% more errors contributing to a patient's death (27). Beyond the clinical reasons for limiting resident work hours, their quality of life has also been found to improve when they work less, as evidenced by decreased depression, decreased emotional exhaustion, less risk of motor vehicular crashes, more time with family and more time to read (25). As results differ by program (particularly surgical vs. non surgical) and institution, generalizability may be limited. The educational consequences of limiting duty hours is addressed in commissioned paper 9: Issues Related to Residents as Workers and Learners and commissioned paper 10: Length of Training in Postgraduate Medical Education in Canada and commissioned paper 24: Supporting the Development of Residents as Teachers: Current Practices and Emerging Trends.

Predictors of Resident Resilience and impact on Performance

Much of the available literature on resident well-being is focused on negative consequences of distress as opposed to measures of its detection, promotion and prevention. Validated tools of physician wellness have not been found, and the literature is limited in definitions or measurements of resident well-being. Factors identified as promoting resilience in a qualitative study of 26 residents in Maryland included the development of a sense of professional satisfaction and accomplishment, opportunities that promote growth and autonomy, and the ability to maintain a sense of pre-residency self (16). Residents who engage in problem focused or active coping strategies as opposed to passive wishful thinking appear to be more resilient to distress (2, 10), which provides opportunity for training programs to teach active self management skills. Residents also experience an improved sense of well-being when they have input into their training program and when they possess a sense of control and flexibility over their scheduling. Interestingly, this was more significant than hours worked (2, 10). These are similar to indicators that have been identified as promoting work-life balance satisfaction in practicing physicians (31).

Prevention of burnout was explored in a study in 2009, which identified a number of protective factors in residents. Having a strong social support network, talking about feelings, seeking professional counseling, having good coping skills like active strategies for managing stress, and engaging in many self care activities such as exercise and meditation were significantly associated with less burnout (32).

Though there is little evidence that an increase in resident quality of life improves provider or patient outcomes, what exists suggests that increased well-being may promote professional behaviours including empathy and compassion (21). Residents report making improved patient care decisions, delivering more compassionate patient care, being more collegial with other

residents and staff, and having greater motivation for their daily work and career with improved well-being (19). Employing a validated survey tool to measure physician empathy, Shanafelt et al demonstrated that residents with higher mental well-being had higher cognitive empathy scores (3).

Physician Health Education in Postgraduate Medical Curricula

Medical educators and regulators interviewed for this paper support the call of physician health experts and leaders (1) for the essential need and significant opportunities for innovation in teaching physician health in postgraduate education, but identified a number of challenges in their implementation. (44, 45, 46) There is a lack of literature describing specific examples of physician health curricula that have successfully been incorporated into postgraduate curricula, often published as case reports and generally not rigorously evaluated. More is being done at the undergraduate level, though there are few published reports of comprehensive, integrated well-being programs built into core curriculum (33). Shapiro et al in 2000 published a review of multiple stress reduction interventions in both undergraduate and postgraduate medical training that indicated trainees participating in a wide range of stress management programs demonstrated improvements in psychological well-being, coping skills, empathy and immunologic function. Examples of active stress management skills that have been taught in medical education include Mindfulness Based Stress Reduction (MBSR), and cognitive behavioural and relaxation techniques. MBSR training in primary care practitioners demonstrated short- and long-term improvements in personal well-being and enhanced patient centered care (35). Mindfulness interventions improved burnout in residents and medical students (33, 35). The Health Enhancement Program in the undergraduate medical curriculum at Monash University in Australia combines MBSR, cognitive strategies and reflective practice to raise awareness of stress and its effects on well-being and performance. After six weeks of the program, participants indicated statistically significant improvements in scores of depression, hostility and quality of life (33). Interviewees familiar with best practices in undergraduate physician health curriculum identified MBSR training in sites across North America (43, 45).

Many initiatives to integrate professionalism education into medical training have focused on reflective learning exercises to increase self awareness. These include narrative writings and portfolios which are based on developing a collection of evidence that learning has taken place and are tools for assisting formative assessment and professional development. Appreciative inquiry methods which encourage reflective learning from questioning strengths and successes have also been explored. All of these approaches can be integrated in to the postgraduate learning environment (44). The professionalism curriculum at McGill was identified as an innovative best practice example of curricular integration through undergraduate and postgraduate education (47).

Residents learn and work in organizational cultures that profoundly influence how they perceive the value of their health and well-being in the context of patient care. The professionalism literature has identified an inherent tension between what is taught in medical education, how it is learned, and the powerful effects of the hidden curriculum, which are particularly relevant in the teaching and learning of physician health (4, 20). Interviewees emphasized the importance of making the teaching relevant to the learning environment (the bedside) and the need for faculty role modeling and faculty champions both to legitimize physician health as a pursuit worthy of curricular attention and to enhance changes in the influential informal and hidden curricula (44, 46). An investment in faculty development for the enhancement of their own wellness skills and in effective teaching and evaluation strategies of learners was identified by all four interviewees as being an area of essential need (44, 45, 46, 47). A survey of program directors at the University of Toronto (Office of Resident Wellness, unpublished data 2010)

indicated that only 26% of respondents could identify a member of their faculty who was capable of delivering physician health curricula. One interviewee identified the emerging trend of integrated and distributed medical education as a potential challenge to ensuring consistencies in faculty role modeling physician health and professionalism (47).

Support Services for Residents in Difficulty

Residents generally show poor compliance with recommended health guidelines (36). Distressed residents, like practicing physicians, are reluctant to access the medical system for mental health problems for numerous reasons including shame, lack of time or access and fear of confidentiality, but also for concerns that it could negatively impact evaluations (10, 37). They will most frequently turn to family and friends for help before seeking professional help (5, 11). Quite concerning is that, in a sample of residents with a 20% prevalence rate for depression, nearly half of these residents were unaware they met criteria for depression and only a small number received treatment (9). Mandatory self reporting to the provincial colleges for medical leaves or mental health and substance abuse diagnoses can further hinder identification and treatment (1). Paradoxically, a resident's right to confidentiality can also present a barrier to appropriate care, as support plans developed in undergraduate education may not be passed on to postgraduate programs or even within training sites. One interviewee identified this as an "impairment of communication" that he suggested contributes to the delay in recognition of learners with potential mental health issues and creates gaps in their care (47).

The high prevalence of resident distress coupled with poor health seeking behaviours led the ACGME to require that all postgraduate medical training programs make assistance services available for residents and to recommend that they offer both service and educational components (38). The most recent Canadian postgraduate accreditation standards state that all residency programs must establish and maintain mechanisms for residents to access services to manage stress and other issues (39). Essential features of appropriate support services have been described that include facilitated access to assessments, counseling, and coordination with postgraduate training programs (38, 41). When asked about preferred resources, residents identify career and financial counseling (39 and 37% respectively), in addition to support personnel (27%) and resident support groups (23%) (5).

Residents have access to provincial physician health programs, which offer expertise in the assessment, management, monitoring and support of mental health and substance abuse issues and can facilitate the transition from education to practice. However, their relationships with training programs vary among institutions, which can lead to lost opportunities for communication and collaboration to optimize the trainee's academic success. Additionally, these programs may not provide full care service particularly for physicians with physical or learning disabilities.

Resident counseling and support services in existence are increasingly well utilized (32, 41). Yearly visits to the Office of Resident Wellness at one Canadian university have increased by a factor of 10 from 2006/07 to 2009/10, suggesting that residents will access services if available (42). There is no available literature evaluating the effectiveness of such programs in preventing or treating resident distress other than utilization data and user satisfaction.

Summary

Despite the limitations of the evidence found in the literature review, it is clear that residents are at risk for significant mental health problems and that these problems negatively impact their personal well-being, academic performance and patient outcomes. The issues for postgraduate

medical education have been outlined above and the implications of these and future directions can be summarized as follows:

Physician Health Education and Support Must be Embedded into the Postgraduate Medical Education Context

Embedding physician health education and support into the postgraduate medical education context requires a focus on two distinct components: 1) the teaching of essential competencies of physician health in postgraduate medical education and 2) developing appropriate services for the identification, management and support for residents in need.

1) Opportunities for Curricular Development

Considerations for curricular development include:⁴ 1) convincing teachers and learners alike of a) the value and need for teaching physician health, which requires time and space in busy curricula and b) helping them recognize it as a set of skills that need to be taught while being respectful of its personal nature; 2) the absence of widely available, validated teaching tools known to be relevant and effective for teaching physician health within a competency-based framework; 3) addressing the powerful influence of the informal and hidden curricula in the teaching of physician health and well-being and 4) a strong need for faculty development in the understanding of physician health issues and the need to identify, promote and sustain the commitment of faculty leaders in this domain.

By embedding physician health as a key competency in the Professional role of the 2005 CanMEDS educational framework, the RCPSC has been an international leader of physician health teaching in postgraduate medical education. Efforts are underway from the RCPSC to more clearly define the required elements of physician health in a competency-based framework. The CanMEDS Physician Health Guide published in 2008 (43) is one example of a toolkit for educators to support the integration of physician health into postgraduate curriculum, but there remains a need for rigorous curricular design and implementation and learner assessment as essential tasks given new competency expectations. Methods promoting self reflection such as portfolios, narratives and small group discussion are particularly adaptable to the postgraduate training environments.

The teaching of physician health provides an opportunity for an integrated coordinated education strategy across the continuum from undergraduate medical education through to the practicing physician. Addressing curricular renewal from a big picture perspective can identify areas of redundancy and create opportunities for consistent, integrated physician health teaching.

The demographics of today's residents are significantly different than their teachers, which has significant implications for faculty development. In general, this presents a remarkable opportunity for intergenerational mentoring and subsequent innovation. Many believe that the values espoused by younger generations, including a focus on work-life balance, will, in the end, be a positive change for all physicians but will present challenges in the educational and clinical environments as values, beliefs, and practices clash. Identifying faculty leaders and supporting faculty skill development in order to teach physician health competencies will require considerable focused effort.

2) Establishing Centres of Support and Leadership for Physician Health in Postgraduate Medical Education

Presently in Canada, every undergraduate medical school has the equivalent of an Office of Students Affairs to enhance the identification, treatment and support of undergraduate medical students with identified health needs and challenges. This is not yet the case in postgraduate medical education. Other services that residents can access have variable awareness of and involvement with health issues in the postgraduate academic context, where collaboration with educators, regulators and healthcare providers may be essential to the resident's success. Examples include the unwell resident in academic difficulty or the resident requiring leave or educational program modification and return to work planning. Centres for resident well-being, which are at arm's length from the evaluation role of a program director or postgraduate dean, can provide this critical link between support services and educational programs to optimize academic success for residents in need. Additionally, such centres can provide a home for physician health education and scholarship at the postgraduate level and collaborate with national and international physician health initiatives.

Opportunities for Integration of Services Across the Physician Life Cycle

These issues are multifactorial and complex and will require innovative approaches to the recognition and integration of health and wellness issues along the continuum of the physician lifecycle from undergraduate through to practice. In its mental health strategy for physicians, the Canadian Medical Association has addressed the need to support the learning environment by fostering networking and mutual support among medical learners, addressing stigma within the training environment and the influence of the hidden curriculum, and supporting a continuum of programs and services to address mental health issues and illness including healthy approaches to resiliency and coping. Such integration requires the involvement, support and mindful and appropriate information sharing of university-based medical student and resident affairs offices, accreditation and regulatory bodies and physician health programs to identify, educate, rehabilitate and support students and physicians at risk to prevent the potential adverse consequences of distress. All this needs to be balanced with learner confidentiality and careful attention to human rights legislation. As a first step, in 2009, the Association of Faculties of Medicine of Canada supported a Resource Group on Medical Student and Physician Health to provide leadership and direction on educational issues in physician health and communicate with national and international organizations including the Canadian Physician Health Network.

Patient Safety as a Motivator for Change

Many argue that it is the pursuit of excellence in patient safety that may facilitate real change in promoting physician well-being and, in fact, argue a moral imperative to look after physicians and trainees for the benefit of patients. The clear evidence for change underscores the need for close monitoring and attention devoted to ensuring the strong mental health and self awareness needed from learners, for their own safety and that of their patients. Beyond the watchfulness of self, peers, and teachers, there also is a clear need to identify and minimize modifiable risks wherever possible, because of the high risk of error inherent in this population of providers.

Conclusion

Healthy physicians practice healthier medicine, and postgraduate medical training is optimally positioned to develop and enhance the skills required by Canada's future physicians to sustain vibrant, meaningful careers. A physician life cycle approach from undergraduate through to practice is required to guide the future of medical education of Canada. Appropriate and effective educational tools need to be developed and disseminated to promote health and minimize the impact of distress; collaboration and communication between physician health educators and supports need to be enhanced and scholarly activity of physician health in the Canadian context needs to be supported and promoted. Specifically, research identifying residents at risk, factors promoting resilience and targeted, effective interventions for improving resident mental health and its effects on the overall well-being of residents, faculty and patients needs to be encouraged. Cultural and environmental challenges require the engagement of multiple stakeholders including hospitals and other resident training sites. It is an opportune time to look at these issues critically and intentionally as part of a future of medical education of Canada strategy.

The three key messages in this paper are as follows:

1. There is a need for innovative, rigorous curricular design and implementation and learner assessment in physician health, given new competency expectations. This will require the consideration of organizational cultures and elements that contribute to the hidden curriculum, demand collaboration among universities, hospitals and other resident work environments, and involve significant faculty development and support.
2. Postgraduate medical education offices need to establish centres of leadership in education and supports for the prevention, promotion, identification, assessment, and rehabilitation of physician health issues, much like the student affairs offices in undergraduate medicine. These services need to be integrated and coordinated across the physician life cycle from undergraduate medical education through postgraduate and continuing professional development. They will require the collaboration with provincial physician health programs to enable the continued development of essential self awareness and coping skills, facilitate early identification of problems, and initiate appropriate support.
3. The present tension between the self care needs of the resident and the needs of the patient and educational program must be reframed, supported by evidence that links the negative impact of resident distress on academic performance and on patient care and safety, and the potential for improvements in these domains with increased resident well-being.

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45. Dr. Jane Lemaire, Vice-Chair Physician Wellness, Department of Medicine at the University of Calgary and also for Alberta Health Services, Calgary zone
46. Dr. Melissa Andrew, Director of Resident Affairs, Queens' University.
47. Dr. Bob Byrick, Chair, Registration Committee, College of Physicians and Surgeons of Ontario.
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Appendix 1: About the Author



Susan Edwards (MD, CCFP, FCFP) is a family physician and Lecturer in the Department of Family and Community Medicine at the University of Toronto. She is the Director of the Office of Resident Wellness in the Postgraduate Medical Education Office at the University of Toronto which provides leadership in postgraduate trainee wellness through education, advocacy, support services and research and contributes to the understanding and promotion of physician health issues in medical training. She is the author and co-lead for this paper.

Appendix 2: Annotated Bibliography

Eckleberry-Hunt J, Lick D, Boura J, Hunt R, Balasubramaniam M, Mulhem E, Fisher C. An exploratory study of resident burnout and wellness. *Academic Med* 2009; 84(2):269-77. and McCray LW, Cronholm PF, Bogner HR, Gallo JJ, Neill RA. Resident physician burnout: is there hope? *Family Medicine* 2008; 40(9):626-632.

These papers, the first being a survey of 150 residents from 13 programs and the latter a systematic review, attempted to assess rates of burnout in residents, possible predictive factors and interventions to combat the problem.

Fahrenkopf AM, Sectish TC, Barger LK, Sharek, PJ, Lewin D, Chiang VW, Edwards S, Wiedermann BL, Landrigan CP. Rates of medication errors among depressed and burnt out residents: prospective cohort study. *BMJ* 2008; 336(7642):488-491.

Using validated tools to determine rates of depression and burn out in pediatrics residents, this study identified prevalence rates of depression and burn out, the association between them, and subjective and objective assessments of rates of error in depressed and burnt out residents compared with their non-affected colleagues.

Shapiro S., Shapiro D., Schwartz G. Stress management in medical education: a review of the literature. *Academic Medicine* 2000;75(7): 748-59.

A unique review of stress management intervention strategies utilized in medical education, including a summary of what was found to be helpful as well as ineffective.

Other useful papers in the area of Resident Wellness include:

CMA Board Working Group on Mental Health, & CMA Physician Mental Health Strategy Working Group. Physician health matters: a mental health strategy for physicians in Canada. *Canadian Medical Association (CMA)* February 2010; 182:1-30.

Ratanawongsa N, Wright SM, Carrese JA. Well-being in residency: effects on relationships with patients, interactions with colleagues, performance, and motivation. *Patient Education and Counseling* 2008; 72(2):194-200.

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Appendix 3: Interview Questions

Interview Questions for commissioned paper 23: Resident Wellness and Work/life Balance

Pre-circulate background information and consent form (already sent with interview request)

Introduction-review understanding of FMEC and reason we are asking for their unique perspective

- 1) From your perspective as XX, what do you see to be the key issues for the teaching and support of physician health, well-being and work-life balance in postgraduate medical education?
- 2) What do you perceive to be significant challenges to these in the postgraduate medical education environment?
- 3) What opportunities do you see for postgraduate medical education to affect these?
- 4) Competency based education is an emergent theme in PGME. Do you have any comments about teaching and evaluating physician health in a competency based framework?
- 5) Part of this project is to identify best practices in teaching and support of physician health. Are you aware of examples in PGME that do this well?
- 6) One of the themes we are exploring is the coordination and integration of physician health learning and support from UGME-PGME-CPD. How could this be done better?
- 7) If you had the opportunity to modify the PGME experience to improve the teaching and support of physician health, what 2 or 3 things would you suggest?