

# **A Qualitative Study of Occupational Stress and Burnout among Emergency Physicians in Canada**

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“Is that ‘experience’ or is it burnout when you jump into a quick conclusion? Not wanting to work them up. Not wanting to investigate them. I think it’s a really fine line between being experienced and efficient versus being burned out and cutting corners.” (Participant #8)

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## ABBREVIATIONS

BCMA	-	British Columbia Medical Association
CMA	-	Canadian Medical Association College
Emerg.	-	Emergency department
Emerg. Docs	-	Emergency doctors
EPs	-	Emergency doctors / emergency physicians
FFS	-	Fee for service
GI	-	Gastrointestinal
HPG	-	Hypothalamic-pituitary-gonadal
Mat.	-	Maternity
Resus.	-	Resuscitation

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# ABSTRACT

**Title:** A Qualitative Study of Occupational Stress and Burnout among EPs in Canada

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**Introduction:** Research suggests that burnout is a commonly reported concern among emergency physicians in Canada. In addition, burnout is understood as having serious consequences for emergency physicians (EPs), the quality of patient care and the health system at large. Despite consistent data suggesting concerning levels of occupational stress and burnout in EPs over time and across settings, few qualitative studies of Canadian EP experiences are available.

**Study Objectives:** The primary objective of this study is to generate insight into the experiences and perceptions of occupational stress and burnout among emergency physicians in Canada. The secondary objective is to consider how their perceptions and experiences of coping, interventions and health and wellbeing might reveal insight into not only occupational stress and burnout, but also ways of potentially supporting occupational wellbeing in this profession.

**Study Design and Method:** This study employed a qualitative exploratory research design. I conducted semi-structured, in-depth interviews with fifteen EPs practicing in three urban centers in Canada. I systematically and comprehensively coded the data and used thematic analysis to identify categories and themes in the EPs accounts of their work experiences. The major themes that emerged related to occupational stress, burnout, protective resources, coping strategies, and engagement. These themes were then compared with previous research and analyzed with reference to the current scholarship about emergency physicians in Canada and contemporary theories of occupational stress and burnout.

**Findings:** This study suggests that resource constraints, relationships, policy, and coping strategies contribute to occupational stress, while the volume of stressors, experience, age, perception and coping strategies appeared to mitigate the impact of these factors. Furthermore, factors typically considered protective were reported to either mitigate or contribute to occupational stress depending upon the circumstance. Factors identified as potentially influencing burnout were additional serious stressors, in excess of factors contributing to occupational stress; such as divorce, lawsuits, perceived errors, and the inefficacy, inaccessibility or removal of habitual coping strategies.

**Implications and Recommendations:** Multiple factors may mitigate or exacerbate occupational stress. For instance, task-oriented and emotion-oriented coping strategies may either contribute to or reduce occupational stress, depending on the circumstances. The high grit and resiliency of EPs may increase stress and contribute to some EPs pushing beyond their capacity, which may contribute to burnout. On the other hand, self-awareness and self-regulation may have a positive influence on stress reduction and protect against burnout. The data suggests that cumulative stress is potentially unsustainable for some EPs when in addition to habitual work stress they are faced with additional serious personal or professional stressors and insufficient support.

# INTRODUCTION

Research suggests that burnout is a commonly reported concern among emergency physicians in Canada (Atkinson, Ducharme, & Campbell. 2017; Ducharme, Laban, Sivilotti & Rowe. 2010; Fralick, 2014; Holroyd, Rowe, & Sinclair, 2004; Lloyd, Streiner & Shannon, 1994). In addition, burnout is understood as having serious consequences for emergency physicians (EPs), the quality of patient care and the health system at large (Arora, Asha, Chinnappa & Diwan 2013). Despite consistent data suggesting concerning levels of occupational stress and burnout in EPs over time and across settings, few qualitative studies of Canadian EP experiences are available (Atkinson et al., 2017; Iacovides, Fountoulakis, Kaprinis & Kaprinis., 2003; Manocha, Black, Sarris, & Stough, 2011). EP perspectives on the experiences of occupational stress, coping and burnout is an important topic that may have an overarching impact on culture and practices in medicine and the wellbeing and longevity of emergency physician careers.

In response to the need for further research, this qualitative study examines EPs experiences and perceptions of occupational stress and burnout. The study considers how emergency physician perceptions of occupational stress and burnout, methods of coping, experiences of engagement and perceived supports in their profession to illuminate greater understanding of possible processes or factors implicated in burnout in this population. The study was conducted amongst EPs from three urban centres on the west coast of Canada.



# CHAPTER 1: LITERATURE REVIEW

## 1.1 Global Context of Occupational Stress and Burnout among Emergency Physicians

The health risks posed towards individuals in high-stress professions is a longstanding area of interest and concern. Emergency physicians (EPs) are a sub-set of professionals understood to be at high risk for work-related burnout (Iacovides et al., 2003; Manocha et al., 2011). “Burnout” is characterized in the Maslach Burnout Inventory (MBI) as “a syndrome of depersonalization, emotional exhaustion, and low levels of personal accomplishment” (Maslach & Jackson, 1982). The research predominantly characterizes burnout as a clinically recognized syndrome (Schaufeli, Leiter and Maslach, 2008).

EP burnout is understood to have negative personal and societal consequences. It may develop because of the nature of the profession and the good intentions and high expectations of the professionals who chose the career (Bragard, Dupuis and Fleet, 2015). Emerging evidence suggests that 7-10% of EPs are significantly impacted by depression, suicide, alcoholism, drug use, and marriage instability (Schmitz, Clark, Heron, Sanson, Kuhn, Bourne, Guth, Cordover, & Coomes, 2012). For nearly three decades, it has been well documented that the visible impact of EP stress is experienced among emergency medicine trainees and residents who have a higher prevalence of substance use compared to other specialties (Hughes, Baldwin, Sheehan, Conard, Storr, 1992).

Amongst increasing concerns about EP health and wellbeing, there has been a call for a culture change in emergency medicine to address EP occupational stress (Popa, Araat, Purcarea, Lala, Popa-Velea, & Bobirnac, 2010; Lu, Dresden, McCloskey, Branzetti, Gisondi, 2015).

Coping with occupational stress and burnout in the emergency department are common topics discussed in the literature. Negative associations were suggested between perceived levels of short-term coping, physician exhaustion and employment tenure (Potter, 2006). Other factors contributing to occupational stress in this population include a lack of personal accomplishment and depersonalization and emotional exhaustion associated with the workplace. These factors have also been associated with physical and psychological symptoms such as insomnia, fatigue, gastrointestinal symptoms, decreased concentration in emergency physicians (Arora, Asha, Chinnappa & Diwan, 2013; Wallace, Lemaire & Ghali, 2009). The literature also suggests that burnout may have serious consequences for the quality of patient care and the health system at large (Arora et al., 2013).

For EPs specifically, studies consistently document that high levels of stress in the emergency

department can lead to high rates of burnout (Arora et al., 2013; Shanafelt et al., 2012). In a study in the United States, Shanafelt et al. (2012) suggested that emergency physicians have the highest rates of burnout (65%; Maslach Burnout Inventory) when compared to both the general population and other physicians (Shanafelt et al., 2012; Arora et al., 2013). A study in Romania supported this finding and suggested that the incidence of burnout increased with the number of years in practice (Popa et al., 2010; Arora et al., 2013). In a 2011 study in France, EPs had high burnout scores of 52% using the Copenhagen Burnout Inventory (CBI), with 21% of the EPs reporting that they intended to leave the profession in the near future due to workplace stress-related reasons (Estryn-Behar et al., 2011).

As noted above, there is evidence that burnout amongst EPs negatively impacts their medical decision-making. For example, Arora and colleagues (2013) found high associations of EP self-reported burnout and medical errors; noting that with every one-point increase in the depersonalization score of the Maslach Burnout Inventory (MBI), there was an 11% increase in medical error report rate (Arora et al., 2013). In the same study, situational factors such as an excessive workload, insufficient pay and inadequate peer support contributed to higher rates of burnout (Arora et al., 2013). Other studies have attempted to identify risk factors and characteristics that might pre-dispose EPs to burnout. Results from Lloyd and Shannon's (1994) study suggested that depersonalization (cynicism about one's competence) coincided with younger physicians and those with greater experience had low cynicism and higher personal accomplishment scores (value of one's work) (Lloyd & Shannon, 1994). However, there have been conflicting results. For instance, no demographic associations were suggested in Goldberg's studies (Goldberg, Boss & Chan, 1996). The literature quite unanimously suggests that occupational stress contributes to burnout and negatively impacts EPs worklife.

Another area explored in the literature are interventions to support EPs to manage occupational stress and burnout. In Maya Romani and Khalil Ashkar's (2014) special journal article 'Burnout among Physicians', the authors discuss interventional research that has addressed burnout among medical students, residents and practicing physicians. The authors summarize evidence-based interventions aimed to improve their psychological wellbeing, career enjoyment and the quality of care provided to patients (Romani & Ashkar, 2014). They identified the need for a combination of both individual and organizational support to reduce EP burnout (Romani & Ashkar, 2014). Despite the emphasis on both levels of support, the literature has, until recently, focused predominantly on assessing and addressing the personal factors that may lead to burnout. More studies have begun to

suggest that assessing and addressing both the personal and environmental factors is more beneficial than focusing solely on individual change (Eckleberry-Hunt, Lick, Boura, Hunt, Balasubramaniam, Mulhem, Fisher, 2009; Panagioti, Panagopoulou, Bower, Lewith, Kontopantelis, Chew-Graham, Dawson, van Marwijk, Geraghty & Esmail, 2017; West, Dyrbye, Erwin, and Shanafelt 2016). In Maslach, Schaufeli and Leiter's (2001) review of burnout, the authors suggest that interventions that focus on the individual only aid with the exhaustion dimension of burnout but not depersonalization or low levels of personal accomplishment. Focus on the individual alone will not address the structural, systemic barriers that may be resolved by organizational changes. Identifying structural problems and organizational shortcomings may aid in identifying what actions are needed to address the multiple issues that contribute to EP burnout. Further, identifying specific factors and experiences perceived by EPs to be supportive and protective may also illuminate solutions.

It was repeatedly noted in many studies that research is needed to understand how different personal and environmental factors influence burnout and wellbeing in EPs. (Gallery, et al., 1992; Ishak, Lederer, Mandili, Nikraves, Seligman, Vasa, Ogunyemi, & Bernstein 2009; Ludwig & Kabat-Zinn 2008). In discovering the challenges that EPs encounter in the workplace, there may be a greater possibility to develop evidence-based solutions to support EP long-term health, wellbeing, and engagement (Maslach et al., 2001).

In summary, to the researcher's knowledge, there hasn't been substantial evidence associating certain risk factors with burnout or increased susceptibility to burnout. As a result, this thesis hopes to contribute greater understanding of EP perceptions and experiences influencing burnout. The results will be used to offer recommendations for potentially reducing occupational stress and supporting the health, well-being, and engagement of EPs throughout their careers.

## **1.2 Background of Canada, Canadian Medicine, and Canadian Emergency Physician Burnout**

### **1.2.1 Canadian Setting Background**

This study takes place on the west coast of British Columbia, Canada. It included participants from three cities: Vancouver, Nanaimo, and Victoria. Canada is a high-income country and has a population of 36.7 million (Government of Canada, Statistics Canada, 2017). The country consists of 10 provinces and three territories. There is a publically funded socialized universal health care system available to all Canadian residents. For most centres, health services are decentralized, and the provinces and territories are responsible for administering health care.

The universal medical system is designed to ensure that Canadians have high-quality medical care at a reasonable cost. However, a survey of 11 developed countries found that Canada had among the poorest access to a doctor or specialist, longer wait times for elective surgery, and the highest dependence upon emergency departments for care (Schoen et al., 2010). Further, in a 2004–2005 survey, 62% of Canadian EP directors perceived overcrowding to be a major or severe problem (Canadian Agency for Drugs and Technologies in Health CADTH, 2006). The perception at this time was that it took too long to get ‘from triage to treatment’ and patients were spending too long in the emergency department (Bullard, et al., 2009). The issue of overcrowding and the delay of patient referrals out of the emergency department may also impact EP stress and burnout levels.

Efforts have been made to address overcrowding, hospital closures, lack of space and beds, and the resulting impact it has on quality of patient care and physician overload (Innes, 2002; Ducharme et al., 2010). Overcrowding in the emergency department has been an issue for over 20 years. There have been attempts to address the rushes that are inherent in an emergency department. Functions such as access block are complex systems that have been researched and discussed in depth (Affleck, Parks, Drummond, Rowe, & Ovens, 2015). Affleck et al. (2015) said in the CAEP (Canadian Association of Emergency Medicine) statement that EDs are not the problem but their inability to admit patient or access in-patient beds that is the cause of overcrowding (Affleck et al., 2015). EPs keep patients longer than is necessary because other wards are not prepared to receive patients. A lack of available beds, incoming patients from the other departments, on top of the emergencies coming through the door, continue to contribute to emergency department overloading.

Another structural remedy for the issue of overcrowding introduced in Canada was Fee for Service. Fee for service (FFS) is a payment model where each procedure or service is paid for separately (Blomqvist & Busby, 2012). In British Columbia, 80% of specialist doctors, including many EPs, use a single-payer system. (Canadian Institute for Health Information, 2013). Positive outcomes for patients has been suggested in a systematic review of studies about incentivizing Pay-for-Performance programs in the US, UK, Spain, Italy, Australia, and Germany (Van Herck, De Smedt, Annemans, Remmen, Rosenthal, & Sermeus, 2010). Whether it is beneficial for physician stress is less clear. FFS has been criticized for increasing stress to physicians, as payment is dependent on the quantity of care, rather than the quality of care (Sibbald, 2000; Innes, 2002). Similarly to other pay-for-performance programs, there has been some evidence that FFS may lead to improved outcomes for patients (Vermeulen, Stukel, Boozary, Guttman, and Schull, 2016). Although it may be beneficial to patients, whether FFS is to the advantage of EP stress levels or increases their burden is unclear. A

discussion of the perceptions and experiences of EPs may help to illuminate the perceived impact and negotiation of structural issues and workload challenges that EPs deal with every day.

### **1.2.2 Burnout and Emergency Physicians in Canada**

In the Canadian context, there exist a limited number of studies on stress and burnout in emergency medicine. Much of the work published in recent years refers to one study published in 1994 by Lloyd, Streiner, and Shannon (1994) entitled 'Burnout, Depression, Life and Job Satisfaction among Canadian Emergency Physicians.' This study was a survey study of 268 physicians. The authors suggest that though the levels of burnout, depression, and life and job satisfaction were tolerable, nearly 40% reported not being satisfied with their lives. Depression scores were reported to be similar to emergency physicians in the United States, but Canadians experienced lower levels of emotional exhaustion, higher rates of depersonalization and much higher scores with regard to low personal accomplishment. Nearly 16% met the criteria for depressive symptomatology, and over 35% fell within the 'dissatisfied' range. There was alarm from these findings as these results were similar to those found among a group of abused women, doctoral students, nurses, health care workers and male prison inmates (Lloyd et al., 1994).

The topic of burnout among Canadian EPs extends beyond this specialty. In a recent study, there was a remarkable impact of burnout on productivity (Dewa, Jacobs, Thanh & Loong, 2014). In this study, health service loss from early retirement of Canadian physicians was estimated at \$185.2 million (Ibid). In another Canadian study, more than half of the physicians, in general, reported that tiredness, exhaustion or sleep deprivation had a negative impact on the care they were able to provide to patients (Wallace et al., 2009). Over half (58%) of physicians said that their personal and family lives suffered because the demands of their profession were too great and nearly two-thirds (64%) said they have a workload that is too high (Canadian Medical Association; 2003). In another study of 3000 Canadian doctors, two-thirds of physicians from British Columbia reported that their workload was too taxing and have similar rates of professional burnout to other Canadian doctors (Borsellino, 2010). In summary, the literature summarizes a persistent association between the occupational stress and burnout in this profession. Both individual responses and external situational factors are emphasized as impacting and mediating the relationship. Understanding sources of stress and their relationship to occupational stress and burnout may improve not only the lives of Canadian emergency physicians but also their patient care and emergency departments in Canada at large.

## 1.3 Theoretical and Conceptual Framework

The following section includes an introduction to the history of the development of burnout as a concept. I will then describe the key dimensions that comprise burnout as a construct, the major critiques and the development of the construct. Lastly, I will describe the research that considers the symbiotic functioning between individual and situational factors in occupational stress and burnout research.

### 1.3.1 Burnout: the construct of interest

The term burnout was first used in an academic study by H. J. Freudenberger (1975) in 'Staff Burnout.' Schaufeli and Enzmann (1998) conceptualized burnout as the slow draining of energy from a battery (p.1). Initially, it was used only as a colloquial term for mental exhaustion, but the concept was soon adopted and studied (Ibid). Burnout was a compelling concept to researchers in the late 1990's, that implied that humans had a fixed amount of energy that could be extinguished like a flame being put out (Ibid). Unlike many theories about mental conditions over time burnout emerged from empirical observations and has been understood to have strong ecological validity (Hallberg, 2005).

One continuing debate about burnout as a concept is whether burnout should be considered a social problem or a medical diagnosis. As well, a debate started about whether burnout was the same as exhaustion or depression. Burnout expanded from a psychological phenomenon to encompass a medical diagnosis as well, at least in some European countries such as The Netherlands and Sweden (Schaufeli et al., 2008). New burnout outcome assessments also appeared during this time, such as previously described Maslach Burnout Inventory (MBI) and others such as the Copenhagen Burnout Inventory (Kristensen, Borritz, Villadsen, and Christensen 2005) and the Oldenburg Burnout Inventory (Demerouti, Bakker, Vardakou, and Kantas 2002). However, the MBI remains the most prominent instrument to assess burnout. Most scientific research has used the MBI in Canada and the US (Maslach and Jackson, 1981). Maslach's construction of burnout was used in 93 percent of the journal articles and dissertations at the end of the 1990s (Schaufeli and Enzmann, 1998, p. 71).

Despite the MBI's dominance as an outcome assessment in scientific research, scholars continue to debate the conceptual underpinnings of burnout (special issue of *Work & Stress*, Vol. 19 (3), 2005). For example, some critics maintain that burnout is exhaustion rather than a multi-dimensional phenomenon (Kristensen et al., 2005; Pines and Aronson, 1981; Shirom and Melamed, 2005). While others describe more the construct as several dimensions including engagement (Maslach, 2003). For the purposes of this thesis, I will be using Maslach's definition of burnout. In the following sections,

a more in-depth description of the Maslach Burnout Inventory and its development will be provided and historically contextualized.

### **1.3.2 Key Dimensions of Maslach's Burnout, Critiques, and Development**

In the early 1980's, efforts to achieve consensus on defining burnout began. Specific dimensions have been proposed. For example, Maslach (1982) suggests that burnout include (1) emotional exhaustion, (2) depersonalization and (3) reduced personal accomplishment (Maslach, 1982). Consequently, Maslach used this conceptualization to develop a measure of burnout called the Maslach Burnout Inventory (MBI).

Engagement was later added to the construct of burnout as its positive antithesis, where engagement was hypothesized to be at one end of the spectrum and burnout at the other end. Here engagement is described antithetically to burnout as the absence of stress as a result of being fully absorbed by, and enthusiastic about one's work (Hallberg, 2005). In other burnout literature, engagement is also conceptualized as the opposite of burnout measured by opposing attribute including: a sustainable workload, feelings of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work (Maslach et al., 2001; Maslach & Leiter 1997).

In Maslach's definition, burnout is unique in that it has three dimensions that can arise in "normal" individuals. Empirical data has suggested that it is a problem specific to the work context and it differs from job satisfaction because of the commonly found negative correlation between the two constructs (Maslach et al., 2001; Bakker, Schaufeli, Demerouti, Janssen, Van Der Hulst & Brouwer., 2000). In the general employment context, there is a debate about what causes burnout. Some literature suggests that it may be that burnout causes people to be dissatisfied with their job or that a decrease in job satisfaction serves as a precursor to burnout (Hallberg, 2005; Pines, 1993; Maslach et al., 2001). Other literature suggests that both job dissatisfaction and burnout are caused by another factor, particularly work conditions (Cherniss, 1980; Cooper, 1986; Handy, 1988; Maslach et al., 2001). Either way, a general consensus exists that burnout has a direct relation to work and is a psychosocial phenomenon rather than a medical or psychological problem that can happen in any person.

There are different theories of how burnout arises. One theory is that only idealistic workers burnout, or that those who are "on fire" in their work are more likely to burnout (Hallberg, 2005; Pines, 1993; Maslach et al., 2001). This may suggest that the most vulnerable are those who have the greatest exposure to occupational stress in terms of duration or intensity.

From a sociological perspective, burnout as a model may be qualified as a direct consequence of conditions encountered at work (Cherniss, 1980). Criticisms of psychological perspectives that focus on individual vulnerabilities, attempted to balance the focus from individual factors to a greater focus on the role the environment plays in the burnout of an individual (Cherniss, 1980; Cooper, 1986; Handy, 1988; Maslach et al., 2001). Burnout was later understood to be a social phenomenon that recognizes the interaction between individual and situational factors influencing normal individuals (Maslach et al., 2001). Specifically, it has been suggested that environmental factors are most strongly correlated with burnout (Maslach et al., 2001). Recent studies of burnout in physicians have suggested that a joint focus, changing the individual and the organization, is more beneficial (Panagioti et al., 2017; West, Dyrbye, Erwin, and Shanafelt 2016).

It has been suggested that research about burnout that focuses on a problematization of the individual: leaving their position, changing their behaviour or strengthening inner resources, fails to address the organizational structures implicated in the problem (Handy, 1988; Maslach et al., 2001). There is a concern that a focus on changing the individual may contribute to the problem as it ignores organizational structures implicated in burnout (Cherniss, 1980; Cooper, 1986; Handy, 1988; Maslach et al., 2001). Further, interventions that focus on changing the individual have had mixed results (Arora et al., 2013; Maslach et al., 2001). Individual strategies such as mindfulness meditation or developing better coping skills have been shown to help with emotional exhaustion in the short term, however it has been suggested that they do little to deal with the other two dimensions of burnout: depersonalization and inefficacy (Arora et al., 2013; Fortney, Luchterhand, Zakletskaia, Zgierska & Rakel, 2013; Maslach et al., 2001). Interventions that consider the protective and constraining influences of the organization, as well as the individual, have had positive results in addressing burnout (Arora et al., 2013; Maslach et al., 2001, Michel, Sangha & Erwin 2016; Panagioti et al., 2017; West et al., 2016).

### **1.3.3 Operationalizing Theoretical and Conceptual Frameworks**

Theoretical frameworks were considered in analysis of the data from the study approaches of Maslach's inventory (2001), Bakker & Costa's theoretical analysis of job burnout (2014) and Eckleberry-Hunt's (2009) studies of resident burnout and wellness. The current study considered how these well-established conceptual and theoretical frameworks of occupational stress and burnout related to the themes that arose in the study data. Bakker and Costa described in their theoretical analysis of burnout that the causes are generally divided into two categories, situational factors and individual factors (Bakker & Costa, 2014). Eckleberry-Hunt further considered how situational and individual factors contribute to or



protect against burnout in her study of wellness in medical residents (2009). Considering the subjective experience and organizational structures through this lens worked to organize and understand the significance of the data.

### **Situational Factors**

In more recent studies situational factors have been suggested to be prime correlates of the phenomenon of burnout (Bakker & Costa, 2014; Maslach et al., 2001; Eckleberry-Hunt et al., 2017). For example, work overload, which has been consistently related to burnout (Virtanen, Oksanen, Kivimaki, Virtanen, Pentti, & Vahtera, 2008; Maslach et al., 2001). Work overload is when there isn't enough time for the work required. The absence of job resources, both social support and other resources, like job demands, have been suggested to have a high correlation to burnout (Bragard et al., 2015; Maslach et al., 2001). How the organization operates, the rules that constrain and protect workers, their access to resources, as well as how hierarchies function have been suggested to have extensive and persistent influence. Participant perceptions of these factors will be discussed (Maslach et al., 2001). Situational factors have been quantified to inquire into organizational structures that impact resident and physician experience of factors associated with occupational stress and burnout (Eckleberry-Hunt et al., 2009, Eckleberry-Hunt et al., 2017). Occupational characteristics, such as conflicts with colleagues or client-related stressors are also situational factors that are meaningful in this population (Maslach et al., 2001). These suggested prime correlates will be analyzed within the context of the data.

### **Individual Factors**

Individual factors, such as coping and individual attributes will be considered in how they may mitigate situational factors or influence burnout. Although it has been suggested that individual factors are more weakly correlated with burnout and not clinically relevant, there are some notable findings (Bragard et al., 2014; Potter 2006; Maslach et al., 2001). For instance, in Potter's study, it was also suggested that personal issues and coping techniques were contributing factors to burnout (Potter, 2006). There have been a number of suggested influences of individual factors upon burnout that will be considered in analysis.

Regarding personality characteristics, it has been suggested that there is a lower risk to those who have higher hardiness levels, where hardiness is measured by the Maslach scale (Maslach et al., 2001). Kobasa (1979) defined hardiness as a sense of control, engagement in daily activities, and enjoying challenges. Having idealistic or unrealistic expectations has also been hypothesized as being a risk

factor for burnout (Maslach et al., 2001, Pines, 1993). There have been mixed results for this hypothesis however. Some studies of burnout have suggested that those who are “on fire” in their work may be more susceptible to burnout (Maslach, 2003; Pines, 1993). Personal characteristics will be considered in analysis as well as the different approaches and understanding of their meanings.

Differentiation between coping style, coping, and comparative analysis is difficult (Zeidner & Endler, 1996). Given this weakness, there have been associations suggested between emotion-oriented coping with burnout in Canadian emergency department staff as compared with a decreased risk for burnout in emergency medicine with task-oriented coping (Howlett et al., 2015). Task-oriented coping is resolving the current problem; where priorities are organized and the worker learns from their mistakes. Emotion-oriented coping is feeling distress, becoming tense or blaming oneself. Thus, unpacking the differences in coping methods and how they were identified by participants may illuminate how coping strategies are employed and what their strategies mean to EPs. Participants were asked to identify the coping strategies they perceived as adaptive (protective to health) and maladaptive (detrimental to health) (Holton, Barry, & Chaney, 2016). Identified coping was considered in terms of whether the coping strategies were perceived as being protective factors or contributing factors to EP stress. Based on burnout and coping literature this study considers how individual factors, such as coping strategies, identified by participants may be protective against or contributing to occupational stress and burnout (Eckleberry-Hunt et al., 2009, Eckleberry-Hunt et al., 2017).

The theoretical framework considers Maslach’s construct of burnout as it is most relevant and comparable to other Canadian and American studies (Howlett, Doody, Murray, LeBlanc-Duchin, Fraser, and Atkinson, 2015; Lloyd, Streiner & Shannon, 1992; Maslach et al., 2001; Panagioti et al., 2017; Schaufeli et al., 2008; West, Dyrbye, Erwin, and Shanafelt, 2016). It is anticipated that the data collected from this study will give insight into processes between individual factors, such as coping, and situational factors, such as organizational structures, through the subjective experiences of participants around issues associated with and relating to occupational stress, burnout, coping and engagement.

## **1.4 Rationale for the Study and Research Questions**

### **Study Rationale**

This study was motivated by what has been understood and presented as high levels of occupational stress and burnout in the emergency medicine profession (Atkinson et al., 2017; Iacovides et al.,

2003; Manocha et al., 2011). Occupational stress and burnout are commonly reported by Canadian emergency physicians (Ducharme et al., 2010; Holroyd et al., 2004; Lloyd et al., 1994). In addition to its consequences for EPs themselves, burnout may have serious consequences for quality of patient care and the health system at large (Arora et al., 2013). Despite consistent data suggesting concerning levels of occupational stress and burnout in EPs over time and across settings, few qualitative studies of Canadian EP experiences are available. EP perception of the experience of occupational stress and burnout and their inherent implications may reveal insights to optimize the health and wellbeing of this population.

### **Research Question**

The primary question this study attempts to answer is: “What do the experiences and perceptions of EPs in Canada tell us about occupational stress and burnout and the significance of these phenomena in their profession?” The secondary question is: “How do individuals cope with perceived occupational stress and burnout, and what are their experiences and perceptions of coping, health and wellness?”

### **Study Objectives**

The primary objective of this study is to generate insight into the experiences and perceptions of occupational stress and burnout among emergency physicians in Canada. The secondary objective is to consider how their perceptions and experiences of coping, interventions and health and wellbeing might reveal insight into not only occupational stress and burnout, but also ways of potentially supporting occupational wellbeing in this profession.

## CHAPTER 2: RESEARCH DESIGN AND METHODOLOGY

### 2.1 Study Design

This study aims to generate insight into the experience and perception of occupational stress and burnout among emergency physicians. The lack of qualitative studies in this population and the continued prevalence of burnout among EPs made a qualitative study a valuable endeavour.

Qualitative research gives a voice to nuanced perceptions and experiences that have not been heard. Qualitative methods are useful to explore complex behaviours, attitudes, and norms that other methods do not. Qualitative methods can also be useful in alleviating the pre-emptive reduction that can occur in other forms of inquiry.

A qualitative research design may illuminate fine distinctions in the self-reported experiences of EPs and further, may expand upon the current understanding of burnout and occupational health in emergency medicine. As a result, a qualitative approach was selected to answer the research questions in this study.

### 2.2 Recruitment, Saturation, and Sample Size

The research team invited all emergency physicians working at tertiary care centers on the West Coast of Canada, on Vancouver Island and the Greater Vancouver area. The local Principal Investigator, Dr. David Barbic, sent a letter of invite by email to all potential participants in the study. We continued to recruit participants until we reached the number of participants needed for saturation. We estimated a priori that this sample size would be approximately 15 EPs. As with many aspects of qualitative research, saturation is hard to define (Bowen, 2008) and it is the depth of the data that is of greater importance than the number of participants (Burmeister, Aitken, 2012).

The focus of saturation for this study was to have enough participants to have a mix of perspectives as well as to be able to complete the analysis in the time available for a Master's level study (Charmaz, 2006). The principle of 'saturation' means that data collection is complete when no new insights emerge or when the available participants have been exhausted (Mason, 2010). When the fifteen interviews were completed the research team felt that saturation in terms of a varied sample, and an acceptable depth of insight had been accomplished, so no further interviews were required.

The sample was derived from convenience sampling only within the population of study. As Patton explained, participants are not randomly selected for qualitative inquiry, but selected with the purpose to provide rich insights that are central to the purpose of the research (Patton, 1990). Participants

were contacted because they possess characteristics and valuable knowledge on the topics being studied. We sent out a request for participation in a number of lists of emergency physicians in British Columbia Canada, so only EPs were contacted. Convenience sampling was used, as we accepted the first 15 who answered the request for participation, so there was no preference for any characteristic or particular type of participant.

## **2.3 Exclusion and Inclusion Criteria**

The participants were required to be employed as an actively practicing emergency physician in a hospital in Canada and willing and able to provide informed consent. Participants were also required to be eighteen years or older and willing and able to read and respond in English.

The Exclusion Criteria were that EPs could not be less than eighteen years of age, unable to read or respond in the English language, unable to provide informed consent, retired from, or were no longer practicing emergency medicine.

## **2.4 In-depth Semi-Structured Interviews**

I used a semi-structured interview design to answer my research questions. In-depth semi-structured interviews involve one-on-one interviews with a small number of participants to explore their perspectives on a particular idea, situation or phenomenon (Boyce & Neale, 2006). This method of data collection is useful to obtain detailed information about a person's thoughts and behaviours or want to explore a new issue (ibid). One of the most important aspects of in-depth interviews for this study was how interviews could provide more detail and complexity to previous surveys and quantitative studies. Although there is data concerning the prevalence of burnout in EPs, there was a gap in obtaining the perspectives and lived experience of EPs working in the field. The interviews provided a relaxed atmosphere where participants could feel comfortable and able to give greater understanding to the complexities of their work life. This was also helpful in exploring the sensitive and controversial subjects that may not be revealed in a survey (Newton, 2010).

The questions in the interview were designed to elicit an in-depth understanding of the experience of the work life of the participating EPs. I developed the interview guide before leaving Norway. The guide related to themes that arose in the initial literature review. There were four major areas of interest. The first was their perceptions and experiences of occupational stress and burnout. The second was the maladaptive strategies they used for managing stressors. The third was the adaptive coping strategies and interventions they used or desired. Lastly, the perception and experience of

health, wellbeing or mindfulness they had, where experiences otherwise experienced as ‘stressors’ were not experienced as stressful. The questions were designed to generate data relating to their perceptions and experiences of both occupational stress and burnout as well as data relating to their perceptions and experiences of health and wellbeing (see **Appendix C: Interview Guide**). The interview guide was semi-structured to allow probing and exploration of the topics that participants raised as important and most relevant to the themes of the study. The emergent themes after data collection were somewhat different as they were refocused on the themes that the participants deemed important and relevant to the study topics.

Challenges to qualitative interview methods have been described (Boyce & Neale, 2006). They can be time consuming and comparisons can be difficult as each interview is unique (Ibid). It is also unlikely that any representative account of the population can be found. However, this is also not the intention of qualitative research (Boyce & Neale, 2006; Newton, 2010). The limitations can also help to reduce the scope of the study, and those findings that are unique can be illuminated and not missed (Newton, 2010). Both the unique and the shared findings may generate an understanding of the population.

The participants interviewed for this study were emergency physicians who came from urban or semi-urban areas. Those in the smaller cities and semi-urban areas may be somewhat different from those of the largest city. The fifteen EPs who first contacted me consented to the study before the interview began and all fifteen participants agreed to be audio recorded. The audio recording allowed for greater comprehension, and notes were recorded in writing after each interview so any non-verbal or other observations could be noted and retained.

## **2.5 Data Collection Tools**

I developed the interview guide with my Norwegian supervisor, Christina Brux Mburu and in consultation with the Canadian research team. The interview guide was pretested in Norway with an emergency physician from a North American urban centre before leaving to enter the field to conduct data collection. The interview guide was used as a semi-structured guide. Additional questions that arose based on the responses were asked and added. During the interviews, additional questions were asked as those interviewed brought up new lines of inquiry. A digital voice recorder was also used, and a notepad was used for any extra notes during, before and after the interviews.

## 2.6 Data Analysis

Data analysis was integrated throughout the data collection phases, as this allowed the researcher to continuously reflect upon emerging themes and engage in early-stage analytical reflection and throughout (Bradley, Curry, & Devers, 2007). Upon completion of data collection, I engaged in a comprehensive and systematic process of initial framework analysis method similar to that proposed by Gale, Heath, Cameron, Rashid, & Redwood (2013). I familiarized myself with the materials, thematic coding of data and reducing the data into categories and lastly interpreting the data through analysis of the entire data set (Gale et al, 2013). The purpose of qualitative data is to follow the emergent themes and to allow the nature of the data to become evident through careful systematic coding. The function of the in-depth analysis is to draw out from the narratives the meaning and nature of their experience (Gale et al., 2013). Emergent themes were therefore also considered in relation to previous research in the fields of occupational stress, burnout, emergency medicine, emergency physicians, physicians and healthcare workers, in Canada and internationally and analyzed in reference to themes in previous related research. This approach is appropriate for qualitative data analysis. The research was focused predominantly on studies from 2013 to 2018 however if no pertinent studies were found in those years of the theme or area, older studies were sought. Further, if a definition of a theory or idea arose in a later source the citation of the original source was cited rather than later uses.

Based upon all transcripts within each broad category, I organized the themes to include the different experiences and perceptions of each of the major themes. This was a dynamic process that shifted as greater insight into the shared themes emerged. Initially, the broad themes were organized by their relationship to the researcher's objectives themes, some of which were retained however changing them as necessary to fully expose the meaning of the data. As Reimer (2006) reminds us through his cite of a Malinowski quote from 1922; "Preconceived ideas are pernicious in any scientific work but foreshadowed problems are the main endowment of a scientific thinker." Themes shifted as greater understanding developed. The themes that arose illuminated meaning both through the operationalized theoretical and conceptual framework and in reference to the emergent themes.

Thematic analysis was used to illuminate and organize core concepts. Interviews were coded by the areas in questions initially, cross-referenced with shared answers and then reorganized into those patterns, categories, and themes that arose in the answers rather than from the interview questions. This was done using HyperResearch Qualitative Data Analysis Software 3.7.5 (Researchware Inc., 1988-2014). The coded data was then compared and contrasted manually using reports that separated

the coded material into shared themes, and those quotes were then considered as a group. Quotes from the major themes were compared and contrasted. The analysis noted differences and similarities between participant perceptions of the themes. Overarching themes were considered in a number of ways. First, by looking at the organized data and the emergent themes from the organization and reduction of coded material. Second, the emergent themes were considered in relation to themes identified in the burnout literature. Lastly, the data was recoded to ensure that the comparison to literature had not interfered with the data being clearly visible. The second coding was done manually using excel, reporting the major themes, sub-themes, codes, code details, and the number of mentions and number of participants who cited each code, which can be found in **Appendix A**. The appendix does not include the researcher's notes relating to each code recorded. The discussion follows the themes, sub-themes, and codes in Appendix A.

Initial models derived from the data were verified by my Canadian advisors, a multidisciplinary research team, David Barbic, an emergency physician and Skye Barbic, an occupational therapist, verified the data. Triangulation (i.e., multiple methods, analysts or theory/perspectives) was used to assess the consistency of the findings and verify the qualitative data analysis. Triangulation is defined as the combination of two or more data sources, theories methods or investigators (Kimchi, Polivka, & Stevenson, 1991). The transcripts were reviewed by the Canadian advisors to become familiar with the data and to verify that the researcher had competently coded and analyzed the data. When completed, comments and additions were made and verification was confirmed.

## 2.7 Ethical Considerations

### 2.7.1 Informed Consent

When a person expressed interest in the study, a time was set up to meet with the potential participant, to review the study procedures and obtain written consent (**Appendix B**) prior to participation in the study. If the study participant was in the Metro Vancouver area, the interviewer (HF) and participant met face-to-face. When a participant was living outside of travel range (100km), a copy of consent was emailed to the emergency physician, and any questions they had about consent were discussed by phone. In both cases, participants were given time to ask questions about the study and were informed that their participation was voluntary and that they could withdraw at any time. Participants were provided with a copy of their signed consent form for their own records.

The basic requirement of research as put forth by the Nuremberg Code is informed consent; "The voluntary consent of the human subject is absolutely essential." (Nuremberg Doctor's Trial, 1996)



Consent was obtained for this project before the interviews and what is more, it will be made clear that informed consent is a continual process and agreement to the research before it begins, however, this does not mean that a participant is locked in. Consent is voluntary and is an open process and participants may continue or leave at any time. Understanding that they can leave at any time is imperative and full disclosure is a vital aspect in my communication so that individuals understand that there is no coercion and they are free at all times to participate or not. The Council for International Organizations of Medical Sciences guidelines is clear that participation can only be undertaken by competent individuals; who understand the project, choose to take part after considering the information and who have experienced no coercion or intimidation in the process (CIOMS, 2002). It was also ensured that they understood the risks and benefits of the research so they were in a position to determine whether the research is in their own best interests. Because the participants in this research are physicians it is unlikely that they will be unable to provide informed consent or suffering from severe psychological or emotional distress, or have a diagnosable mental illness that would make them vulnerable to a lack of understanding or competence (Fleischman & Wood, 2002).

It is essential that the research procedures and the potential risks and direct benefits that this would have for the individual be disclosed (Newman, Walker, & Gefland, 1999). The risks associated with participation in this study are likely to be mild. However, the researcher considered that informed consent may be compromised. Informed consent implies that participants will be able to understand the risks and benefits of research participation.

### **2.7.2 Confidentiality**

Semi-structured interviews require building a trusting relationship if only for the duration of the interview. It is impossible to anonymize interview data at that stage of the analysis. However, after the protocols of anonymization are applied quotations, speech mannerisms and context may provide enough information for participants to be identified by themselves or others, and it is not always easy to predict which data will lead to identification. In the case of this study, all that possibly could be done to protect the participants' confidentiality was done.

First, participant names were not written down, only interview number. Second, all participants were informed that the study was voluntary and that they did not need to reveal anything they did not want to. Also, they were informed that tape recording the interview was voluntary and asked if it was alright if the recording could take place. Lastly, data was processed without names or other

identifiable information and was used only for the purpose of this study. Audio recordings were locked and in the researcher's possession throughout data collection. They were deleted from all external computers before analysis began as no recordings could leave Canada. In December 2016, all non-anonymous data was deleted. All anonymous materials will be kept for ten years and then deleted.

Participants were asked for permission and confidentiality was ensured. All documents are identified only by code number and kept in a locked filing cabinet. Participants were assured that their names would not appear in any reports of the completed study. In addition, neither their names nor any personal identifiers are or will be used in any reports or publications arising from this study.

In order to further protect participant identity and ensure anonymity hospital names and details that might be compromising were edited out of quotes and in some cases gender assignments were also shielded, randomized and/or made ambiguous, with careful attention to ensuring that participant meaning was not compromised. It also was ensured that no misrepresentation occurred as a result of a change in gender assignment. Further, participants were blended together, so a reference to a young, middle-aged or senior EP could refer to a number of participants in the study. Multiple methods were used to ensure identities were concealed while ensuring the meaning of their perceptions and experiences was not compromised. Lastly, the document was verified by my supervisors to ensure that any details I might miss were modified or deleted to ensure confidentiality. The purpose of the research is not to incriminate physicians but to represent the meaning of their shared perceptions and experiences accurately.

In conclusion, the ethical framework around which this research was done takes into account the needs of the participants, the voracity of the data and data analysis and protecting the wellbeing and rights of participants. Obtaining informed consent, ensuring confidentiality and anonymity, avoiding misrepresentation, a lack of interference with participant data or the misuse of knowledge produced by the research has been upheld to the greatest degree possible.

### **2.7.3 Ethical clearance and approvals**

A request for preliminary project assessment was submitted to the Norwegian Regional Committees for Medical and Health Research Ethics (REK). Given that this is a qualitative study of subjective experiences and perspectives, the study was exempt because it was not generating new knowledge related to clinical practices so it could be conducted without their assessment and approval. The project was thus reported to the Norwegian Social Science Data Services (NSD) and received

approval (**Appendix G**). Given the data collection took place in British Columbia, it was decided, that the University of British Columbia would responsibility for the data and ethical integrity of the study. This was reported to and confirmed by NSD, and NSD subsequently discontinued project follow-up given that the data control responsibility was transferred to a non-Norwegian institution. Research permissions were sought and obtained from the Social Sciences Ethics Board at the University of British Columbia in Vancouver, Canada (**Appendix H**). The project, including participant recruitment, data collection, and interviews began after all necessary research permissions and ethics had been obtained.

## 2.8 Reflexivity

According to Horsburgh, the actions and decisions of a researcher will invariably impact the meaning and context of the data under investigation and reflexivity is an active acknowledgment of this relationship (Horsburgh, 2003).

### 2.8.1 Background of Researcher

The background of the researcher plays a critical role in the construction of the study. My background is in cultural anthropology and the not-for-profit sector. After completing my degree in Cultural Anthropology at Simon Fraser University in 2004 I worked in non-profits in Canada, South Korea, and India. I have worked in organizations helping people with disabilities, battered women and in orphanages as a volunteer, care worker, administrator and the director of services. I grew up on the west coast in Vancouver Canada and there was an ease with the context in which the interviews took place.

My interest in this study arose out of a personal reflection on the roles that stress and meaning play in directing our lives. The impetus to study the experience of emergency physicians, in particular, was a result of seeing an emergency physician resolve issues around dealing with stressful patient interactions with a reframing practice at a mindfulness seminar in Los Angeles. Her work was inspiring. After doing my preliminary research into the experience of stress and burnout by emergency physicians, it was evident there was a gap in the field and contributing to the discourse on emergency physicians experience of work was worthwhile.

### 2.8.2 Theoretical Bias of Researcher

My theoretical bias coming into this research arose from a focus on cultural anthropology, medical anthropology, gender studies, and a post-structuralist postmodern perspective. Studying sociology

and anthropology in Vancouver Canada, criticism of objectivity and phenomenological approaches to research were often the focus in my undergraduate studies, emphasizing the impossibility of a perspective free from hypothesis or preconceptions (Husserl 1970). There was a greater focus on how interpretation and meaning is constructed and that the researcher must be visible in the 'frame' of the research as a subjective participant and that detached impartial observation is impossible (Plummer 1983, Stanley & Wise 1993). Research without bias or preconceptions is an impossibility in the traditions of many humanist and feminist researchers (Stanley & Wise 1993). I inhabited this perspective further as holding that an individual's construction of their reality shapes that reality, and therefore extricating oneself from the construction of knowledge is impossible. Academic writing in itself can be seen as a form of hegemonic constructed authority (Said, 2003), which is essentially biased and constrained by the researcher, the research question and the scope of the study. As Margery Wolf discusses in *A Thrice-Told Tale* (1992), considering issues of exploitation, construction of 'the other', how I contribute and how hierarchies impact my research, are at the centre of my reflection (Wolf, 1992; Crosby, 1991). This was in no small measure why I chose to do my research with western physicians in a western country to remain in line with my desire to avoid all exploitation of academic authority in another's culture.

Once research began, I focused on accurately recounting participant experiences. Although a postmodernist may deny the possibility of representing others' culture or that doing so is an exercise in domination (Wolf, 1992) there was a point at which this perspective is limiting, idealistic and indulgent. The focus of a study should remain with imparting the participant data as faithfully as possible and not being clouded by a post-modern focus on the construction of knowledge (Wolf, 1992). In an attempt to avoid bias a more 'pure phenomenological' approach was adopted where an attempt to understand essential "truths" (Byrne, 2001) of EP lived experience was sought and "to describe rather than explain" (Lester, 1999; Husserl, 1970). The focus of my analysis shifted as thematic analysis progressed and I worked to incorporate models that related to the themes and include deductive as well as inductive reasoning.

## CHAPTER 3: RESEARCH FINDINGS & DISCUSSION

In a recent study on physician burnout, there was a call for more studies that might model the risk factors for burnout to help to further illuminate measures to protect physicians from burnout syndrome (Dusunen, 2017). As a qualitative exploratory study it is hoped that an analysis of the research participants' experiences and perceptions will generate qualitative insight and complement what have predominantly been efforts to clinically define, psychometrically measure, and statistically assess potential risk and protective factors.



**Figure 1. Major Themes emerging from my study**

This chapter begins with a brief description of the participants' characteristics and then goes into the findings coupled with discussions of their meaning. The data is analyzed inductively and deductively in the light of relevant literature in three themes; occupational stress, protective resources, and burnout. The first theme, occupational stress (section 3.2), is discussed in four emergent sub-themes; the perceived influence of resource constraints, policy and professional constraints, challenging relationships and stressful coping strategies (figure 2).

### Occupational Stress

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Resource Constraints

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Policy and Professional Constraints

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Challenging Relationships

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Stressful Coping Strategies

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**Figure 2. First Theme with sub-themes**

The second theme, protective resources (section 3.3), is also discussed in four emergent sub-themes; protective relationships, administrative support, protective coping and engagement (figure 3).

## Protective Resources

Protective Relationships
Administrative Support
Protective Coping
Engagement

**Figure 3. Second Theme with sub-themes**

The last theme, burnout (section 3.4), is discussed in three sub-themes, the description of burnout, the experiences of burnout and the changes in coping strategies as a result of burnout (figure 4).

## Burnout

Descriptions of Burnout
Experiences of Burnout
Coping with Burnout

**Figure 4. Third Theme with sub-themes**

Each section ends with a summary and a list of implications. These overarching implications guided the development of the conclusions, implications, and suggestions for future research in chapter five.

### 3.1 Socio-Demographic Characteristics of Participants

A total of 15 participants were recruited for this study. All participants were Canadian emergency physicians who were actively practicing physicians. Some self-reported attributes may impede anonymity so they have not been included here and may have also been excluded throughout the findings. The socio-demographic characteristics of the participants are summarized in Table 1 below.

**Table 1 Socio-demographic characteristics of participants**

Characteristic	n=15	Details
Female	5	All under 54 years of age
Male	10	All age groups
Age under 34	2	
Age 35-44	5	
Age 45-54	4	

Age 55-64	2	
Age 65 or older	2	
Single	4	
Married	11	
Has Children	10	
Takes part in Academic Teaching	13	Two youngest participants had not yet begun teaching
Department Heads at some point	6	3 said they had been dept. heads a mean of seven years
Years practicing	1 to 39 years	
Quality of Life: Good	1	
Quality of Life: Very Good	4	
Quality of Life: Excellent	10	
Identify as having experienced Burnout	2	
Identify as currently Burned out	1	Of the two who identified as having experienced burnout one identified as currently burned out

At the beginning of the interview, participants were asked about their perceived level of burnout. One identified as having had burnout in the last year, another identified as having experienced it in the last ten years, and two others said they had experienced it during their residencies. That said, almost half of the participants identified as having experienced 'symptoms of burnout' in their work from time to time. Further, one participant said that although s/he wouldn't identify him or herself as burnt out, s/he reported thinking that his/her colleagues might identify him/her as burnt out. The sample of emergency physicians held differing opinions on topics, variation in years practicing with a thirty-five-year age span, were married and single, male and female, and those with and without children. Although representative samples and generalization are not aims of qualitative research, it is nonetheless noteworthy that the demographics of the participant sample reflect those of Canadian emergency physicians overall (Canadian Medical Association, (2015), CMA Master File). Overall, participants felt that the topics of occupational stress and burnout were relevant and important to them. Participants reported feeling relieved to talk about these areas in their life and were at ease with the interviewer's questions. Participants were asked about their perception and experience of

burnout, occupational health and wellbeing, contributing factors to burnout, perceived consequences, their coping strategies, perceived solutions and interventions and their experience and perception of mindfulness and engagement.

## **3.2 Perceptions and Experiences of Occupational Stress**

Narratives of participant experience illuminate the perceived factors influencing participant experience of occupational stress. The four sub-themes in this section are; resource constraints, policy and professional constraints, challenging relationships and coping contributing to occupational stress. Reports in this section were not identified as associated with burnout by participants although these factors have been associated with burnout in the literature (Eckleberry-Hunt et al., 2009; Maslach et al., 2001). Resource constraints, professional conflicts, limitations in workplace policy and poor coping strategies have all been associated in previous research with burnout, however, this theme looks at how participants identified these as stressful but navigable.

### **3.2.1 Resource Constraints**

Resource constraints were identified by participants as influencing their experience of occupational stress (n=14). “Job resources are the physical, psychological, social, or organizational aspects of the job that facilitate the achievement of work goals, reduce job demands and its costs, or stimulate personal growth through meaningful work” (Bakker & Demerouti, 2007). The perception of a lack of internal and external resources and increased job demands were of concern to participants, who repeated what previous studies have suggested, that Canadian emergency physicians have increasingly greater workloads, along with fewer resources (Innes, 2002; Ducharme, 2010). This section discusses influences of factors related to resource constraints; workload (n=11), lack of training and mentorships (n=5) and a lack of resources for age and gender-related leaves of absence (n=5). It will also consider how these individual and situational resource constraints were perceived to contribute to their experience of occupational stress.

#### **Workload stress**

Workload stress and time pressure was the theme most often reported by participants as contributing to occupational stress (n=11). Workload has been consistently related to burnout (Arora et al., 2013; Bakker & Costa, 2014; Borsellino, 2010; Maslach et al., 2001). Although studies have suggested that the high levels of EP stress in the emergency department can lead to high rates of burnout, participants described workload as stressful but manageable (Arora et al., 2013; Shanafelt et al., 2012).



One participant explained that it was not their own inability to cope with the stress but their fear of the impact that workload might have on their patients.

*She had a tension pneumothorax pushing her lung over and stuff like that. I had to put a chest tube in and I got her stabilized. I was there an hour later. And I mean, you know, I saved her life, no doubt about that. But, it's just a matter of, I would have felt badly if she had died, and angry because, would she have lived if she went somewhere else, where they are equipped for it. (Participant #12)*

A lack of resources was reported to impact their capacity to treat patients, contributing to reported stress. The mix of heavy workloads and resource deficiencies were identified by most participants (n=14) as contributing to their experience of stress in addition to the impact it might have on their patients. This finding was unsurprising as previous research of burnout has suggested that the phenomenon of burnout has structural causes in the work environment, specifically high job demands and low job resources (Alarcon, 2011; Bakker, & Costa, 2014; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Lee & Ashforth, 1996). Although participants like this one, described their workload as stressful, it was not necessarily identified as a perceived cause of burnout.

Although physicians reported expecting the challenges they encounter, the challenges were also recognized as dangerous and this contributed to reported stress. Overcrowding as a result of reduced resources was a consistent resource constraint perceived as stressful by participants (n=5). This was described in the following,

*We're very busy, all of the time. And it's not uncommon to see, well, you'll always see 40 in a night shift. That's four an hour, of hard patients. That's sometimes 24 ambulances, and you're by yourself, and plus you're running all of the codes<sup>1</sup> in the hospital. (Participant #10)*

There were similar quotes from a number of participants of all ages, male and female. The lack of beds available in the hospital at times meant participants could not refer patients out of the emergency department (n=5). As discussed in the background, in Canada, hospital closures and bed reductions have reduced the capacity of acute care and because of particularly long wait times for specialists, family physicians are also referring sick patients to the ED (Ducharme et al., 2010; Innes, 2002). In Canada there have been studies directed at addressing this situation as sudden rushes in the ED is consistently an issue (Affleck et al., 2015). Some participants reported adapting to these short periods when they would be under-resourced as a result of access block limitations while others felt this was a structural problem that has been normalized.

The next quote explains how multiple factors simultaneously arise in the daily work life of EPs. There was a shared view from participants of an expectation of high-efficiency coupled with the

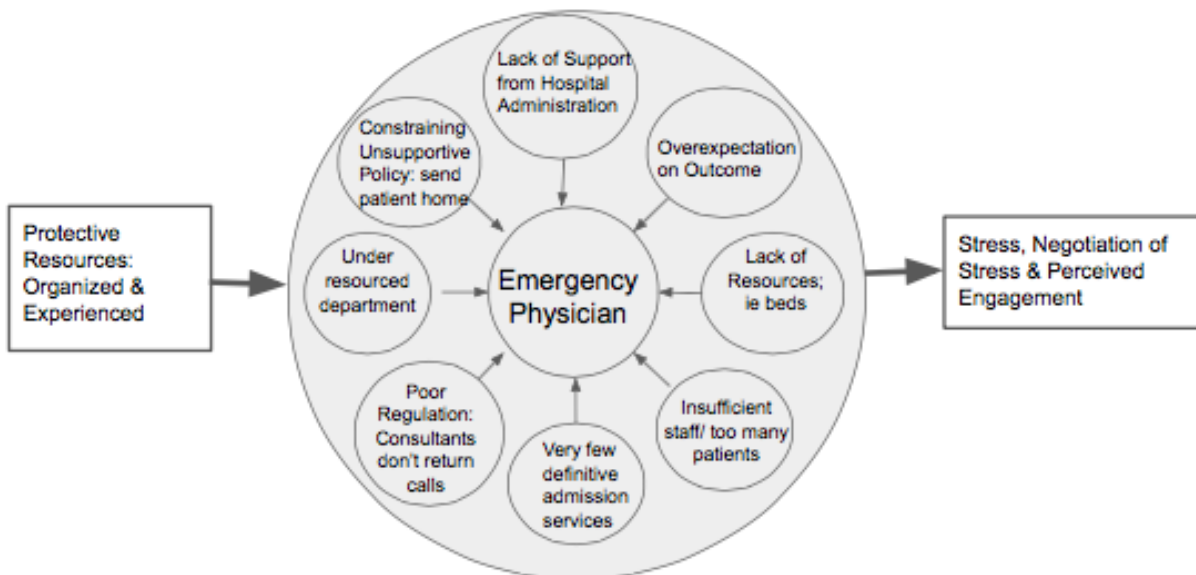
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<sup>1</sup> An emergency event that comes from within the hospital.

necessity to successfully negotiate under-resourced departments. Furthermore, there was a fear for their patients, which in turn contributed to the stress they experience themselves.

*Taking care of patients in often under-resourced departments, with over expectation on outcome, is stressful in itself, but once you've done it for a while, it creeps into that's just what's done and that's reality... There's very few beds and very few definitive admissions services for him [a patient]. We've arranged for various consultants to see him... over a 40-hour period. And so he's handed over to me in the middle of the night shift coming on, and there's literally 20 other patients to see... but you can tell that right away that this guy is not working ... what would have been easy is, okay, to stick to the discharge plan, you can go home and see how this goes, but I know that this is probably going to fail. What's stressful about it was that I then had to make time out of a very busy schedule of seeing other patients some of them sick some of them not, but you're also seeing those patients, every patient you see, you only make money by patients you see. So you need to see other patients and I'm not going to make any money by this guy with the esophageal cancer because he's been handed over multiple times but really I know what his position needs. [What] he needs is to stay in hospital and he needs to have someone to take care of him. And he needs several days or weeks even to really get this thing working properly and to have his pain properly controlled and his nutrition properly addressed. And he really needs that because he's probably only going to live for two or three months and that's the right and the dignified thing to do. But there is no service who will take him, everyone's full. He [patient] really needs a steward. He really needs a champion. It's stressful, I knew what the right thing to do [was]... I knew what the easiest thing to do was; to ignore it and walk away. But the right thing to do is to say fuck it, stop what we're doing and deal with this poor guy's problem and get him a place to be and badger the right consultants to do the right thing and that's what I did. (Participant #11)*

This participant provided an example of the multiple resource constraints participants reported negotiating in a typical shift at work that impacts workload stress. Reporting having over 20 patients to care for (n=11) with a lack of inpatient bed availability, lack of inpatient services, inability to admit patients (n=5) and consultants who do not respond to pages (n=8) was repeated stressful situational factors identified by over half the participants. The perception that they must fulfill the job responsibilities of other specialists was also an issue identified as compounding their stress and workload (n=3). This finding was supported in the Canadian emergency medicine context in Ducharme et al.'s (2010) study that suggests that emergency medicine is not only a safety net for the injured or acutely ill but has become a safety net for the entire healthcare system. Furthermore, some participants, like the one above, described some of their experiences as stressful but also as expected and normal (n=4). The other side of this situation is that although this was identified as stressful with multiple stressful factors, this account was given as an example of a situation where the participant felt particularly engaged. Although the situation was described as stressful, it was also reported as an example of engagement (Figure 5).



**Figure 5. Interplay of coping, resource constraints, stress and engagement**

The anticipation of the situation and the level of experience of the participant was not reported to reduce the stress but it was reported as a situation where the participant was engaged. Stress and engagement were experienced simultaneously. In Bakker and Costa's (2014) review, workers with high levels of burnout were often found in working environments with high job demands and low job resources, and the fatigue of compensating for system inadequacies developed into chronic exhaustion over time (Bakker & Costa, 2014). Participants' expectation of low job resources and engagement did not change their dissatisfaction with it and the stress experienced from it (n=9). One participant said; "there's no flipping' way if that was my grandma or my mom that I would want this person to go home" (*Participant #3*).

Situations that require workers to choose between their ethics and regulation has been suggested to contribute to burnout. (Maslach et al., 2001). More than one participant reported feeling stress related to the need to make ethical negotiations regularly in working to attend to patient needs (n=3). This suggests that EPs confront and negotiate what are, at times, experienced as conflicting demands – in this case, structural pressures to discharge early that are perceived as conflicting with ethical mandates to address patient needs. Research suggests that conflicting demands, and the stress this potentially produces, might be also be associated with an elevated risk for burnout (Bakker, & Costa, 2014; Maslach et al., 2001; Maslach, & Leiter, 2003). Although workplace challenges were described by many participants as very stressful they were also often described as negotiable, expected and were not associated with reasons for burnout.

Despite this lack of association with burnout by participants, it has been suggested that negotiating competing requirements by healthcare workers has a high correlation with burnout in many previous studies (Arora et al., 2013; Bakker & Costa, 2014; Maslach et al., 2001; Maslach, & Leiter, 2003; Shanafelt et al., 2012). It is not uncommon for emergency services and studies in England and the US to report similar issues relating to overcrowding and admission problems (Lane, Monefeldt, & Rosenhead, 2016; Bragard et al., 2013). Similar themes around excessive workload arose in studies discussing emergency medicine and burnout in Canadian, European and American studies on occupational stress and burnout in emergency medicine (Arora et al., 2013; Ducharme et al., 2010; Holroyd et al., 2004; Innes, 2002; Panagioti et al., 2017; Shanafelt et al., 2012; Sibbald, 2000; West et al., 2016). A lack of resources and high workload were the most commonly mentioned situational factors contributing to occupational stress by participants (n=11). Among researchers in this field, workload constraints discussed by participants in this section, are increasingly understood as implicated in burnout (Eckleberry-Hunt, 2017). The findings that workload is high and that EPs find it stressful was supported by the literature and therefore unsurprising. What was surprising was that many did not associate this with burnout, and reported high workload and even overwork as negotiable and situations where they experienced engagement despite the stress. The next subsection addresses the lack of training and mentorship reported by participants and its impact on perceived occupational stress.

### **Lack of training and mentorship**

Whether for administrative work, leadership or stress reduction; a lack of training and mentorship were identified as contributing to a lack of perceived competency for some and is another aspect discussed around the impact of workload and resource constraint to occupational stress. There was a concern that the culture of self-reliance impeded training in administration or areas outside of clinical practice that added further stress to their already pressing responsibilities (n=2). Training also arose in reference to dealing with the stress of their position (n=5). One younger participant, when discussing medical school said; “The only thing we get taught is clinical, you know. We don’t learn the softer side, and I think because the people who come through don’t learn it so they don’t engage in it”. (Participant #7) The perception suggested that their professional culture may discourage EPs to engage with work stress support, practical training (n=3), interventions or administrative negotiation. This reluctance was reported to impede effective communication and inhibit or slow down practical and positive intervention and change.

Some participants reported a lack of training in stress management as contributing to their experience of stress (n=5) while other participants reported interventions in mindfulness or stress management as ambiguous, unnecessary or unhelpful (n=5). One participant described the challenges to implementing stress management;

*I have a huge beef with residency in medical school. I think it's awful. Like we don't get a good footing. Like we're thrown to the wolves. Like the only thing we get taught is like clinical you know? Like we don't learn the softer side and I think it's because a lot of like it's a vicious cycle because the people who come through don't learn it so they don't engage in it. There are very few people I work with even know what mindfulness is... for emergency physicians, there needs to be reiterated a little bit more. Like there is a physician well-being group but I think it's just a penny in the bucket really to be honest. (Participant #9)*

Courses related to burnout and stress management classes in medical school were also described as undervalued but important; “basket weaving stuff... Just get it over with and don't really, just write whatever paper you gotta do and forget about... I think medical schools and residencies are horrible at doing all the ancillary stuff” (Participant #5). This experienced physician expressed annoyance at the lack of value that was given to teaching administrative training, but s/he was also unsurprised by the omission. It did not seem to be a lack of value placed upon professional development but a lack of expectation of it being taken seriously. Other participants took a stronger position and suggest that stress management is inappropriate for emergency physicians. “I don't read articles when I see those terms and I think that association of well-being stuff... for professionals here, or for those doing what I'm doing, [if] you need that, you need a new job... It is a bit of an industry, in my opinion” (Participant #12). There were differing attitudes toward additional training as well as addressing the stress experienced on the job. A reluctance by some or a culture that may expect self-reliance and dissuades stress management while administrative training may contribute to recovery and support for EPs who are at risk of experiencing burnout. In Wallace and Lemaire's (2007) comprehensive empirical study of how to bring in more wellbeing to Canadian physician work life; team building and an open and supportive work environment were recommended (Wallace & Lemaire, 2007). Reduction of gaps in supportive resources in addition to clinical duties through education or support may alleviate stress and be a part of lowering risk of burnout and yet there may be professional cultural issues that impede this change.

### **Lack of Resources for Leaves of Absence, Age, and Gender-related stressors**

Leaves of absence including, pregnancy leaves or reducing hours as EPs age, were identified as stressful because of the fear that their absence from practice would significantly impact their skill as physicians (n=4). Participants shared a fear that being away from work too long would result in diminished skill level and a reduction in competency that might endanger patients, particularly in their

first days back at work. Further, all three participants who were mothers mentioned the lack of support services available for women returning from maternity leave added stress and perceived danger to their role. The situational factors of leaves of absence and EP support were identified as influencing the individual factors of age and gender.

The first quote concerns the perceived impact of time away from practice reported by an older participant who took time off to reduce stress and allow him/her to continue to work as an EP despite the growing strenuousness experienced in their work:

*I work 8 [shifts a month], which I figure is the minimum amount that I can do. And they're hard shifts. If I'm away for two weeks and I come back, I start off with the super easy shift. But once I came back, and I had to work a night shift, and I've been gone, I think, for about three weeks. And I had a bit of nervousness coming back. It took me probably half the shift to get up to speed. Which is so much. (Participant #12)*

Physicians ability to choose the number of hours worked and having short shifts have been one of the ways that Canada and other nations have changed policies, which protect physicians and patients and reduce stress (Pattani, Wu, & Dhalla, 2014). However, as expressed above, for EPs being away from practice is perceived to have an impact on their perceived acceptable level of competence so stress is also experienced as a result of a being away. Participants reported that there is only so much time off that a competent physician can take without their skill being compromised. Another participant worried that the department loses senior EDs for issues related to age and burnout and that this has an impact on younger physicians.

*I think we lose more senior members. We lose their experience. So we've had some senior emerg. [leave] because they said they were burnt out and a couple have left the city, so they go to work in a slower environment, where the pace is slower so then we're losing experienced guys who have a lot of experience to offer. (Participant #15)*

The absence of older EPs was perceived as difficult for this department head as EPs then miss out on the rich experience of more senior physicians can contribute to effective management. This participant continued to express a hope that solutions were found to help retain older physicians.

*I find it tough because I haven't identified a great mentor in medical leadership. So... we're going to this big organization of the staff structure and you know before my time there were directors of emergency medicine and department heads but nobody, for various reasons, nobody's taken on those jobs in the past 5 or 6 years, so there's no sort of senior emerg. leader that I can easily identify for advice or help. (Participant #15)*

Age was identified as a mitigating factor that may influence a number of different aspects of participant stress. The loss of older EPs also ties back to the issue raised in the last section on training and mentorship. Although some participants did dismiss the need for training and mentorship some valued it and identified organizational structures as impeding older EPs from staying in emergency medicine. As well as older EPs reporting pressure to return from leaves

returning early from maternity leave was also cited as there was the same fear of skill loss impacting their willingness to take time off. One participant returning from maternity leave said,

*You know emerg. is like as I've described it; it's scary, and you have to keep up and when you take mat. leave it's like six months off. It's so scary to go back, right. And especially early in your career. (Participant #6)*

More than one female participant reported that EPs who take maternity leave often reduce the duration of leave compared to other women in Canada. Maternity leave was identified as contributing greatly to stress because the practitioner is away from work and must catch up, but doesn't have time to reacquaint themselves with the work. Their required time off to fulfill family duties was influenced by the demands of their employment when they were not at work. Occupational stress following you home for your entire maternity leave may be a factor influencing EP burnout. In a recent US study of considering the impact of maternity leave and its relationship to career satisfaction in female physicians, they reported high rates of career dissatisfaction and significant loss of income (Scully, Davids, & McInitchouk, 2017). Although maternity leaves are intended supports as a result of the characteristics of their position as emergency physicians these leaves were also reported to contribute to occupational stress.

*Because I was scared of being away too long. Because of mommy brain and everything else. I was scared of being too far away from the work and the intensity and the rate of how fast the brain has to fire. So I came back early... I was terrified of forgetting how to run the medical side. I mean, I think my first two shifts were midday kind of supported shifts. That's not really a lot of time to get up to speed. (Participant #14)*

S/he continued with a second point by explaining how when returning from maternity leave that the full range of support and resources that nurses benefit from would reduce stress and increase safety but that this was not available for doctors because of structural differences in their professions.

*The nurses, when they come back, they have buddy shifts. They work half a shift, they have a colleague beside them the whole time... we just get - you show up and you're supposed to be able to work like the day you left. I took a very short mat leave for that reason. (Participant #14)*

Another EP further iterated this experience by adding that there was also a perceived cultural stigma attached to taking leave for pregnancy and child rearing. The physician cited feeling somewhat humiliated by the department head for taking a longer maternity leave time than most physicians. In Canada, most women are entitled to take a full year, but participants said they took four to six months out of fear of not being able to regain lost knowledge and skill. One EP chose to take a longer leave than most emergency physicians and s/he reported experiencing social difficulties after taking nine of an allowable twelve months of the maternity leave;

*Like my boss, I would say he is forward thinking, he is pretty progressive... and you know he kind of made comments like; "having a good vacation?" You know... you know not appropriate, not appropriate in lots of places, but in emerg. he could get away with it... [And] there's always a difficult decision point, like*

*how much time do you take off because you want to spend it with your kid versus when do you go back because it's just too stressful not to go back because you're losing your skills? (Participant 6)*

The stress of missing work was also reported to be compounded by the stress of perceived discrimination and stigmatization from her department head. This may not be unusual, in a cross-sectional survey of female physicians 4 out of 5 respondents reported maternal discrimination (Adesoye, Mangurian, Choo, Girgis, Sabry-Elnaggar, & Linos, 2017) Participants had to compensate for a lack of support and adjust their lives outside of work in service to their job, as the organization or institution do not make adjustments to ensure physician competency or wellbeing.

Leaves of absence were identified as necessary for EPs to care for offspring and to recover from the stress of their position. Fear of losing skill, endangering their patients and pressure from the stigma related to prolonged absence were associated with stress. Job characteristics of emergency physicians may require support in re-acclimating EPs to ensure patient safety. Furthermore, a professional culture that requires a high level of accountability also may influence stigma attached to taking a leave of absence. There was a reported lack of structural support to address structural inadequacies relating to age, gender or stress related or personal absences. Structural and cultural impediments may be implicated in the difficulty for EPs to take a full leave or reintegrate when they take the time off for recovery as a result of age, pregnancy or burnout.

### **Resource Constraints Conclusion**

Resource constraints were strongly implicated by participants in stress experienced in the workplace. Workload pressures came from situational factors like a lack of beds, a lack of expertise and training as well as through structural constraints associated with individual factors like age and gender. There were aspects of their professional culture that may impede addressing gaps in supportive resources in training and leaves of absence. Despite stress experienced participants described negotiating the multiple factors impeding their work with engagement while still fearing for the consequences to their patients.

### **3.2.2 Policy and Professional Constraints**

#### **Limitations of College of Physicians, Administration, Department Heads' and Specialists**

The second subtheme revolved around the perceived impotence of hospital administration (n=6), the failure of regulations (n=8) and the impact of being independent contractors in the hospital (n=7). Administrative constraints, even as a department head, was identified as having both a negative impact upon EP stress and on their ability to make positive changes that might aid in their work.



The lack of response from administrative bodies to issues of workload stress was identified as a frequent and routine part of the job. As described in the previous section, resource constraints and a heavy workload contribute to stress experienced by many participants. This was exacerbated by a lack of recourse by policy and administrative constraints.

*I come in on a night shift, and the waiting room is full; there are four ambulances out front, there are no beds. And there's no beds coming up. And people in the hallway. I call administration and ask "what can we do?" and "there's nothing we can do" is all I get. So it's my problem. That's stress, that's very stressful, and this happens a lot. (Participant #12)*

This quote is from an experienced senior physician who described being comfortable with the work of the job but still identified structural inadequacies as stressful. It was repeatedly reported (n=6) that administration was unresponsive to requests and participant EPs perceive themselves to have in addressing overwork with individual personal change, which has been suggested is limited in alleviating the causes of burnout (Arora et al., 2013; Maslach et al., 2001). In previous studies, overwork and lack of resources have been highly correlated with burnout and the inability to address it through their organizational structure adds to the stress they deal with as a result of their position (Bakker & Costa, 2014; Maslach et al., 2001). Furthermore, in recent studies, it has also been suggested that it is specifically through joint individual and organizational changes that the best solutions may be implemented that reduce burnout significantly (Panagioti et al., 2017; West et al., 2016). When administration isn't seen to be working with EPs that make collaborative solutions difficult.

Another participant expressed frustration at the multiple levels of inaction from; department heads, medical administration, and a perceived lack of accountability for senior specialists, who were perceived as being protected by the authority of their position. In the next quote, the participant explains that although they became a department head and contacted the appropriate administrative bodies and colleagues, it was reported that this did little to aid in addressing the issues in the department.

*"Yes I will speak to them, " but nothing changes. Cause I could still label off a handful of guys who I've talked to; I've talked to like three different department heads, medical administration. I've talked to the college to say; 'these guys aren't doing what they're supposed to do, ' and all you get from the college is; 'the college does not take complaints from physician to physician it only takes complaints from patients.' So I have nothing, they don't want anything to do with this, but they literally told me from one of their, one of their registrars that 'if you get a patient to complain then we're 100 percent going to look into it will do a full investigation but if it's from a physician we won't touch it'. Yet I'm the guy who knows the system and how it should run, and I want to save the patient from getting to the point of getting injured, but you won't touch it. (Participant #5)*

Emergency physicians in Canada are independent contractors who do not work for the hospital so it

is not the administration's job to support them. Many participants identified feeling pressure to uphold policy and anger at an inability to enact change as a result of constraints that cannot be changed (n=8). As EPs aren't employees nor administrators of the hospital, they reported feeling constrained by policy and a system that works separately from them. It was also reported that it is also not in the purview of the College of Physicians to protect their interests, and legislation change is also not seen as the answer. When asking about whether this participant thought changes in legislation might remedy the problem the participant deflected away from the policy as a problem but may implicate it in the process. When asked if what was needed to help alleviate the problems of overcrowding the participant said:

*Well, it's even closer down than that. It's not that far off because it's the medical administration within just above the individual physicians; [and] department heads, actually being given control. (Participant #5)*

Participants like this one described confining aspects of policy and the difficulties in attempting to enact changes because of perceived barriers. Enacting policy or practices that enable EPs to do their jobs better was reportedly difficult. While the above situation suggests that even as a senior department head there are barriers to enacting change other policies were reported to be more stressful for a young participant compared with a few older participants.

As was discussed in the background “fee for service” (FFS) is a specific policy that came up in interviews. Fee for Service means that emergency physicians are paid per patient rather than with a salary. As discussed in the background, some studies have suggested that FFS is not beneficial for EPs (Sibbald, 2000; Holroyd et al., 2004; Ducharme et al., 2010; Innes, 2002), while others have suggested FFS is beneficial (Vermeulen, Stukel, Boozary, Guttman, and Schull, 2016). One possible reason for differences are any other factors that are influencing EPs, such as experience or age. One young participant described challenges attributed to FFS. The participant explained s/he was left alone in the middle of a shift because it was slow and the more senior EPs didn't want to be there as they are only paid per patient. After colleagues left, the participant reported additional stress and concern for patients when a rush came.

*...we've changed the way we get funded recently, so we're fee for service and so when the volumes drop if it's not busy some people will [leave] because it doesn't matter because you're getting paid by the patient, if there are not enough patients around [they say] I'm taking off, I'm not going to stay for my shift... they left around midnight and then at about 1 o'clock in the morning I got this massive boat-load of people. (Interview 2)*

As was discussed in the background, one of the consequences of FFS may be that quality care is diminished in favour of efficiency. Amongst those interviewed, participants over age 40 expressed ease with workload and participants over 60 supported the change in payment method. This may suggest that greater experience and more trust in their ability to work efficiently might limit the level of stress created by fee for

service or overcrowding.

*Yes, fee-for-service. Which is where it's at. It is... It gives you some incentive to say, "you know, I work really hard but I can see these people in half an hour, and these people wait less,"... It may be changing now, and so be it. Safety is the biggest issue. Some people can't see 40 people a night. They can't, and if you can't then, you shouldn't try. (Participant #12)*

This participant was an experienced EP who did not report workload as stressful. However, the participant also explains that safety is the most important issue and not all EPs have the same capacity. It may be the difference in confidence, age, and experience that accounts for the difference in how this is perceived. While some EPs may find FFS reduces quality of care, others appreciate the benefits of this system. Either way both personal perspectives included a concern for patient safety for those who may not be prepared to cope adequately with lower patient to doctor. These differences in needs may explain why collaborative solutions have been suggested to be helpful in creating solutions to policy issues. In a study of physician-organization collaboration, a healthy relationship between organization-physician relationship was suggested to be critical to organizational success (Swensen, Kabacene, & Shanafelt, 2016). The data suggests participants experience individual differences and help to alleviate some of the systemic problems that uphold organizational structures that are intended to be patient-focused rather than EP-focused. The next section discusses the reported stress in constraints of enacting change as department heads.

### **Difficulty Enacting Change**

Being unable to facilitate change despite action taken to make change contributed to perceived stress (n=9). Examples were actions such as, communicating with department heads or becoming a department head and attempting to make changes needed to improve department function. This issue arose with young EPs and with more experienced department heads and senior EPs.

*The way I tried to deal with it at the time was basically becoming head of the department. Unfortunately, all that did was add stress it didn't really resolve the situation. (Participant #5)*

*I was department head for seven years and worked at fixing it, and it's a little bit better... I mean a lot of physicians at the hospital I work at work there because they know that that's been the culture [Specialists not coming in when called], they're not going to be bothered, they're not going to have to come in after hours, or they're rarely going to have to so they really really push it. And that's a lot of the stress that I experience. (Participant #1)*

Participants reported taking steps to address colleagues ignoring calls or administrative constraints, however, two of the five participant department heads said they eventually gave up on attempting to address issues because the work-culture was too entrenched. "Part of my getting out of the administration was I didn't see anything changing. I didn't see a whole lot improving. It was the same things getting recycled over and over again without much change" (Participant #5) An inability to work effectively with administration to address workload was exacerbated by a perceived inability to

give the support they hope for even when in leadership roles. Support from leaders has been suggested to have an impact on physician burnout and satisfaction (Shanafelt, Gorringer, Menaker, Storz, Reeves, Buskirk, Sloan & Swensen, 2015). When administration is unable to help with resource constraints and becoming a department head is perceived to be ineffective in enacting change, it is understandable that individual coping may be perceived as the only option for stress reduction. Constraints were perceived to be intractable, and this contributed to occupational stress.

Many participants reported that they also did not expect support. “I don’t think we’re ever supported in our workplace. We don’t ever expect to be supported you know? I don’t really know what that means...I don’t think we’ve ever really had great support.” (Participant #11) Participants reported that protective policies were non-existent or insufficient, and that they lack control while remaining in a position of accountability and liability. In a recent study on the impact of leadership on physician burnout, leadership qualities of supervisors were reported to impact the satisfaction and well-being of the physicians under their supervision in health care organizations (Shanafelt et al., 2015). As independent contractors, participants reported not expecting support and took steps to negotiate their positions however the lack of support still added to their experience of stress.

The distance between administration and EPs was stressful. A recent meta-analysis study suggested that "the greatest success at preventing and reducing burnout in doctors can be achieved through the adoption of organization-directed approaches such as improved working environment and organizational culture" (Panagioti et al., 2017). The absence of a venue to these issues using Panagioti's (2017) suggested collaboration to address organizational and individual challenges may be implicated in stress. Wallace and Lemaire's (2006) study on increasing wellness in Canadian physicians also found joint efforts and community building effective. Finding a way for administrative bodies to work more with EPs and department heads to make changes may help to alleviate resource constraints and reduce EP occupational stress.

### **Policy and Professional Constraints Conclusion**

In addition to resource constraints and a heavy workload, lack of recourse by policy and administrative constraints exacerbated occupational stress and impeded finding solutions. There were reported barriers to efforts to aid in addressing resource and administrative constraints despite becoming department heads and interacting with supportive bodies as independent contractors change was limited. Policies like FFS may be more stressful for younger participants and although older participants appreciated FFS they also reported concern at the impact it may have on less experienced EPs. Participants reported that protective policies were insufficient, and that barriers to

change impede action.

### 3.2.3 Challenging Relationships

The third subtheme in resource constraints relates to challenging relationships identified as increasing participant experience and perception of occupational stress. Challenges relating to patients and colleagues were common sources of stress for participants. Participants reported that interactions with some colleagues were experienced as taxing, upsetting, unprofessional and at times perceived as dangerous (n=8). Lack of social support is a known predictor of occupational stress in emergency care workers (Van der Ploeg, Kleber, 2003; Adriaenssens, De Gucht, van der Doef, Maes, 2011). Non-urgent patients (n=6) were associated with stress by participants as was interacting with nurses and other physicians in the hospital (n=8).

**Non-urgent patients** Interactions with patients who were perceived as not needing to be in the emergency room were described as increasing perceived occupational stress. Non-urgent patients (stressful overcrowding), such as those with an ingrown toenail, a patient who missed their insulin shot, or a person with a substance use disorder looking for medication were described as stressful specifically when the EP was already exhausted (n=6). “I’ve said it to patients, “why are you here?” you’re here for nothing, really you need to go to your family doc, you’ve had these symptoms for six months.” (Participant #5) This finding is unsurprising as EP have reported being overtaxed by patients with no medical emergencies as well as with patients referred to the ED from within the hospital (Ducharme et al., 2010; Innes, 2002). One participant described how non-urgent patients were only a problem except when they were already overtaxed.

*Little things that normally roll off my back just aggravate me so much and the way that I interact with people is snippy and not very pleasant... they want you to do all these things for them and sometimes I'm like, "ya, you're struggling" like "you're having a rough time, what can we do for you?" and other times I'm just "you're an asshole, get out," you know? (Participant #2)*

Participants described experiencing more stress when they were already taxed and exhausted. Many participants said that they could usually deal with any situation when there is space, time and they are prepared. Non-urgent patients were not identified as always stressful, only when they perceived their situation as overtaxed. However, as described earlier, they often reported being overtaxed.

### Relations with Other Physicians and Nurses

As touched upon in the section on policy and administrative constraints, dealing with the lack of response from other physicians or nurses in the hospital added to the perceived stress. In the next quote, a participant describes how specialists ignoring calls to address patient issues was identified as

a frustrating norm at work.

*When someone phones you and you're on call, you're supposed to answer within a reasonable time. And it's all common sense stuff, but it seems like um once you, once you're out there and you're an 'Attending,' people get the idea that, 'oh I don't have to answer right?' (Participant #5)*

As mentioned in the previous section one participant explained that even as a department head there is a perception of a lack of avenues to address physicians ignoring pages, which was reported to increase stress. Further, the continual normalized and expected lack of communication and responsiveness by specialists was perceived to contribute to EPs being overtaxed, overworked and under-resourced, doing their own job and that of other doctors in the hospital. Again, this was not associated with burnout for any of the participants, but it was another expected contributor to occupational stress.

### **Challenging Relationships Conclusion**

Participants reported experiencing stress from the lack of response from other specialists and nurses. Their inability to address issues of overcrowding and decreased support was reported as stressful. Furthermore, stress experienced as a result of non-urgent patients was also predominantly experienced when EPs were already overtaxed as they often could empathize with patients' situations when they had time.

### **3.2.4 Coping Contributing to Occupational Stress**

The fourth subtheme was the perceived necessity for a sacrifice of self-care using risky or unhealthy efficiencies to cope with the workload, often perceived as both successful and stressful. Participants were asked to identify the coping strategies they perceived as adaptive (protective to health) and maladaptive (detrimental to health) (Holton, Barry, & Chaney, 2016). Coping strategies reported as maladaptive and stressful were also reportedly valuable, effective and necessary to address workload demands. Participants cited not taking breaks, not urinating and not eating or drinking during a shift as a way to cope with the time constraints and workload (n=6). Almost half of participants also mentioned a lack of sleep and not having enough time to recover in between shifts (n=7). Other issues reported were objectifying patients (n=7), cutting corners (n=4), poor communication, isolation, anger, and a lack of debriefing (n=6). Some of these emotion-oriented coping strategies, like objectifying a patient, were identified by participants as helpful, while task-oriented coping strategies, like efficiencies or cutting corners, were in some cases reported to contribute to higher levels of stress. This was a surprising finding as it differed from Howlett et al.'s (2015) study, where greater associations were made between emotion-oriented coping and stress, and a decrease of stress

with task-oriented coping. There were however also coping strategies that were transparently reported as maladaptive and emotion-oriented; casual sex, alcohol, drugs, and suicide to cope (n=8). Whether successful or not, there were many coping strategies identified as contributing to stress to some degree.

### **3.2.4.1 Coping: Contributing to Occupational Stress**

#### **Sacrificing self-care, Self-Isolation, Avoidance and Overwork**

Sacrifice of self-care, avoidance, isolation and overwork were forms of coping reported to add to occupational stress. Participants reported coping with stressful situations by forgoing self-care at work and at home, isolating themselves, avoiding their work or doing more work (n=5). These were identified by a few participants as coping strategies when feeling overwhelmed by both their personal and professional lives (n=3). Although avoidance is a task-oriented coping strategy, dealing with problems at home with excessive work (n=5) to avoid other stresses in participant lives was reported to contribute to further stress.

On a daily basis, simple acts such as taking a break, eating, drinking or urination were commonly skipped in order to respond to the lack of resources and more work than was perceived as possible in the time available. Almost half of the participants said they regularly sacrificed taking a break for eight hours to use the restroom, drink or eat and many said when they did eat, it was often not healthy foods (n=6). That said this was often not perceived as a great sacrifice but a normal part of their working life. One said, "It's really busy. There's no lunch breaks, there's no bathroom breaks". (Participant #4) Another added, "It's quite regular for me at the end of a shift that I haven't peed and I haven't had anything to drink and that's not uncommon and so that's one kind of stress for me." (Participant #6) And a third physician stated, "I, um, literally won't go pee for twelve hours, you know you're just beating your body up". (Participant # 5) Most participants reported a lack of self-care at work and yet it was also normalized. These were task-oriented coping strategies and they were reported as effective and efficient. These strategies were reportedly successful and the consequence of participant health and wellbeing were unclear. Forgoing breaks was a task-oriented coping strategy that may have health implications. If one only considers the lack of hydration and urination, these restrictions have been shown to increase urinary tract infections. (Nygaard & Linder, 1997). Participants said they commonly minimize the care they show for themselves in order to do their job adequately (n=6). Understanding the repercussions of extensive restrictions to self-care on EP stress level, health and wellbeing is unclear as it was also perceived as a supportive coping strategy in

attending to their work.

Compensating for shift work through self-care outside of work was also identified as contributing to occupational stress. This finding has been supported by previous studies where having to sleep at different times of the day and night has been suggested to have a negative impact on workers (Maslach, 2005). Difficulty in keeping a healthy sleep cycle was identified by participants as being impacted by shift work (n=7). One respondent said, “Shift [work] kills your sleep cycle ...I know a lot of emergency docs where sleep is huge where they don’t sleep well, and if you can’t sleep you’re in trouble” (Participant #14). Shiftwork and constantly changing sleep schedules were identified by almost half the participants as sources of stress (n=7).

One participant described isolation as a coping strategy to hide errors, saying; "...there's a tendency when you've made a mistake or perceive that you've made a mistake to not talk about it and um I think that's a negative." (Participant #5) Another describes how excessive workload and an inability to stay on top of their work sometimes led to feeling disorganized (n=2) and cutting themselves off (n=5), which contributed to higher stress. “Sometimes there's so much crap coming across my desk that I just start ignoring things. So it's a bit maladaptive... So um so that's, but that's one way of coping, it may not be appropriate but I mean it's not all the time, but it happens sometimes”. (Participant #15) This was also one example of how participants described a lack of control and self-awareness (n=6) that could overtake them, often only momentarily, when their work became excessive. One study of doctors and nurses suggested that respondents who isolated themselves were associated with higher psychiatric morbidity and burnout (Sharma et al., 2008). This emotion-oriented coping strategy was connected to a lack of training discussed earlier by the participant who couldn’t find a mentor as a new department head and struggled with the added stress. Although this may sound like a coping issue, a structural issue was also implicated in this stress. Coping strategies that have worked for EPs in the past can change in their efficacy when new stresses enter their lives. Sometimes good coping becomes ineffective or in the next example it can become excessive and maladaptive. To avoid the stress of a drawn-out divorce one EP used work to cope.

*And um that you know by far led to a huge amount of stress at the time where the way I, unfortunately, dealt with it was by working at two different facilities full-time, and half-time at another, so I was doing 22-23 shifts a month. I did that for a couple years, with 10 of them being night shifts... I knew I was bouncing all over the place, and I was, I was getting [feedback from] the head of the department 'cause I had complaints about just how I talked to people. (Participant #5)*

Overwork may have been seen as positive in relieving personal stress but it eventually became a contributor to greater stress for this participant. Individual coping strategies of participants were



often related to the ability to power through and have great resiliency. However, when taken to an extreme this same high grit may impede health and wellbeing. This is in contradiction to studies that have suggested that high grit or resiliency is a protective factor against burnout (Gaeta, Dam, Perrera, Jones, & Dulani, 2017). Overwork was, in this case, a form of isolation from other issues in the EPs life and was used to cope with stress in another part of their life. This is an example of supportive coping strategies reported when done to extremes may contribute to participant stress.

Some reported maladaptive coping strategies, such as alcohol, drugs, casual sex and suicide, were identified as breakdowns in self-care that had only a negative influence and added to stress (n=8). These were identified as having no helpful aspects but that they were aware of their influence and the possibility of these strategies taking hold of them. “The ultimate way of dealing with stress [is] when somebody committed suicide.” (Participant #4) Suicide as coping may demonstrate the extremes of stress which EPs must deal with. Research on physician suicide has shown that physicians have to deal with excessive amounts of pressure from their job and cannot always manage, do not get adequate treatment and the stigma of mental health impedes getting the help they need. In previous studies it was suggested that job-related stress is implicated in physician suicide (Gold, 2012).

Participants reported taking steps to avoid or stop these negative coping strategies. “I don’t want to get into that habit of going home and drinking by myself... I know that physicians have a higher rate of addiction problems and mental health issues... So I just don’t wanna go there.” (Participant #2) Some sacrifices in self-care were deliberate and were negotiated to adequately attend to the requirements of their work. Others were identified as untenable and self-awareness and actions were taken to change them (n=3). Whether forgoing breaks, sleep or using unhealthy coping strategies to address stress, participants reported a self-awareness of the pitfalls in cutting corners in their health and they did what they could to minimize the impact of short-term solutions.

When EPs must sacrifice self-care to ensure patient safety there is an imbalance in responsibility for patient care. A system that takes advantage of the resiliency and high grit of EPs may be unsustainable. Again the research suggests that organizational changes in tandem with individual change are what create the best solutions and may reduce burnout significantly (Panagioti et al., 2017; West et al., 2016). When administration isn’t seen to be working with EPs it may both increase stress and reduce positive change that supports EP health and also structural integrity.

#### **3.2.4.2 Protective Stressful Coping**

While the previous coping strategies were identified as maladaptive there were some coping strategies identified as effective but which participants feared might also be detrimental to their overall

wellbeing. Coping strategies such as sharpness with colleagues and patients (n=6), lack of empathy or objectifying the patient (n=7) and cutting corners (n=4) were perceived to be necessary or effective in the moment but not necessarily their ideal strategies. A few participants identified their behavior as sharp, aggressive or inappropriate but also necessary and effective in addressing work situations. Participants reported that these coping strategies were experienced as protective rather than contributing to stress as they helped them negotiate the situation.

As mentioned earlier, Howlett's (2015) study found a negative correlation between task-oriented coping and burnout. On the other hand, emotion-oriented coping was associated with higher stress in Howlett's study and participants sometimes identified these as helpful. The data in this study, however, suggests that whether the coping was task-oriented or emotion-oriented, some of these coping strategies were perceived to be helpful at the same time that they might add to the stress they experienced in their work.

### **Efficiencies - Objectifying Patient, Cutting Corners and Poor Communication**

Half the participants identified "objectifying the patient" (n=7) as an effective method of reducing stress as "the physician that gets too emotionally involved often makes poor decisions." (Participant #8) The participants expressed feeling a need to avoid emotional engagement with the patient to cope with the stress. One participant said:

*You don't know the patient's name. They are 'bed five' or 'bed six'; that's 'the headache'; 'the busted arm'; that's 'the drunk'. You don't want to get too involved... I didn't know his situation at the time, but I found out later, when he came up to me at a Canucks game with his 3-year-old kid and said thank you to me, because I figured out his diagnosis. But at that time I didn't know he had a child at the same age as mine - and that stuff partly [with tears in his eyes] I get very emotional even now, because he has a child at the same age as mine... if I'd known that at the time... then how do you go to the next patient? I mean if I had to deal with 30 of those situations every day then I'd be a royal mess. (Participant #5)*

Objectifying the patient was perceived as allowing some of the EPs to insulate her/himself from feelings that might incapacitate him/her and interfere with his/her job of addressing a life and death medical issue. Efficiency and distance were cited by a number of participants as an important part of the smooth running of their practice. This EP response after meeting the patient in public suggests value was attributed to avoiding connecting with the patient because it might interfere with his/her work. This distancing was not seen as cynicism but a deep focus on the issue at hand and to ensure the patient's pressing health issues were addressed without emotional distractions. Some research of physician burnout suggests that distancing from patients is a prohibitive attribute that endangers EP wellbeing (Thiriaux, Birault, & Jaafari, 2016). In the previous quote, the physician perceives their response as a positive coping strategy while research suggests this may increase one's risk of burnout

(Ibid). While objectifying patients may endanger EPs, fear that closeness with patients will increase stress and fear for their lives and impede their practice was perceived as preferable.

A few participants identified their communication style when addressing challenging situations to be uncomfortable but also helpful (n=6). One participant said:

*I tend to be a guy who will just, I kind of think it's part of how I de-stress, is I'll say what I need. What I want to say whether it be frustration and stuff to whoever's around me; and it is just my way of offloading at the time while I'm working. Not that I mean a whole lot of it, but it's the way I need to sort of vent that at the time. So I do that when I'm at work... I've had nurses sort of say that, say I bitch a lot, but that's just how I sort of get through and they know that. (Participant #5)*

Participants reported awareness that their responses to colleagues and patients were uncomfortable and may create stress for themselves or the people they are working with, but it was effective and necessary. Participants reported this behavior as protective rather than contributing to stress as it helped them overcome the stress they experience when dealing with the high volume of patients they must attend to. This seemed to be in opposition to a recent study suggesting a positive correlation of emotion-oriented coping and burnout and a negative correlation between task-oriented coping and burnout (Howlett et al., 2015). Although emotion-oriented coping was not seen as optimal it was identified as reducing stress.

Furthermore, “cutting corners” is a task-oriented coping strategy, and yet while it was identified by some as reducing stress, others worried that it both increased stress and had the potential to put patients in danger. “Cutting corners”, when addressing multiple patients, was a coping strategy reported in response to heavy workload by a few participants (n=4). It was described by some participants as effective and useful, but others had a concern about this aspect of their work.

Participant #6 said, "I think when you're stressed, when you're busy, you might cut some corners because you're so busy." A few participants also mentioned a concern that errors might occur because of over-efficiency. One participant said, "not performing well, errors that may or may not have consequences but they're there." (Participant #4) Other participants described coping or negotiating with competing demands as controlled efficiencies that attempt to avoid cutting corners.

*One thing that I find is really important is to know when the corner you're cutting is too big of a corner or what you're trying to jam into the shape your trying to jam into a certain box is just the wrong shape. (Participant #11)*

As in this quote, efficiencies were consciously enacted and controlled. The issue of negotiating an edge between efficiency and cutting corners was also related to the work life of EPs as a whole. One participant described the ambiguity of and fluidity between being an adept and good doctor who is efficient and being a poor doctor who is cutting corners and burned out.

*Is that 'experience' or is it burnout when you jump into a quick conclusion? Not wanting to work them up. Not wanting to investigate them. I think it's a really fine line between being experienced and efficient versus being burned out and cutting corners. (Participant #8)*

This quote distinguishes between cutting corners and experience because the participant was self-aware in his/her choice. If one is enacting “conscious incompetence” rather than being “unconsciously incompetent” the consequences are perceived as controlled (Flower, 1999). The impact of having to respond to the rapid pace and the constant negotiation of a heavy workload arises in burnout literature in medical specialties that are demanding and stressful. In one review article on oncologist burnout, keeping up with the rapid pace and the personal distress related to their work was cited as one of the possible reasons for the high prevalence of burnout among oncologists (Shanafelt, & Dyrbye, 2012). Cutting corners was not always identified as a negative or maladaptive coping method by participants but often a necessary part of their work. There seemed to be a disconnect between participant perception of cutting corners as a helpful necessity, and the burnout literature that suggests that overwork has a strong association with burnout (Arora et al., 2013; Bakker & Costa, 2014; Borsellino, 2010; Maslach et al., 2001). This conflict may indicate a lack of consciousness of the impact cutting corners may have on EPs, or that other factors, such as the level of experience of the EP, may have a mitigating effect that reduces any adverse outcomes to them or their patients.

The use of cutting corners has been described as a characteristic of burnt out physicians in previous research. In “Psychological Burnout in Acute Care Medicine: “Physician Heal Thyself”, Brindley described a simple mnemonic that he uses to identify a burnt out physician – “the four Cs”; callousness, a tendency to cut corners, intense cynicism and contempt (Brindley, Patel & Farnan, 2012). There seems to be some discrepancy between what some participants describe as a productive objectification of the patient or cutting of corners and what some research suggests may reflect a burnt out physician. It may be that for experienced participants’ high efficiency is effective and safe, however, for other participants cutting corners and objectifying patients are coping strategies that were experienced as stressful and that worried them as possibly unsafe.

Structural inadequacies may also be implicated in participant discussion on the inevitability of cutting corners in order to get to all the patients. One of the characteristics of emergency medicine is the sudden rushes of patients and the need for high efficiency. "Sometimes cutting corners means I'm better able to get to all my patients." (Participant #11) Another said, "...physicians can get to more patients and be more efficient," there is "less stress because I don't care and I'm more meticulous and less emotional." (Participant #12) As discussed earlier ‘access blocking’ has been a challenge in

emergency medicine a long time and rushes are a part of the position. Participants reported making critical decisions in order to avoid stress and attend to the requirement of their position whether by cutting corners, being sharp with their colleagues or failing to be as organized as they would like. While it is identified as challenging and stressful for some physicians, others are at ease with this part of their work.

The greater experience of older physicians may influence their perception of high-efficiency as gratifying and engaging. They do not necessarily experience stress and when asked whether they experience themselves as cutting corners, they call it efficiency (n=2). There is not a sense that they are cutting corners and they enjoy giving specialists the space to contact them in their own time as is described in the following quote;

*We tend not to call the specialist at night. We let them sleep. ... We do that nightly. And sometimes we get some really complex patients, and you can work them out safely by the end of the night. Along with doing everything else. You have to multi-task. And there's a certain gratification in that. (Participant #12)*

This is a quote from an experienced EP. Workload stress was very low and engagement was high so it was possible for him/her to compensate for the high workload with high efficiency in a way younger or less capable EPs might not be capable. While cutting corners may be an effective short-term solution for some participants, for others it may be stressful and dangerous. Although this experienced participant was comfortable with a high workload, s/he also recognized this was not the case for all EPs and ensuring their safety and the safety of the patient was also important.

*I can see these people in half an hour, and [so] these people wait less... [but] Safety is the biggest issue. Some people can't see 40 people a night. They can't, and if you can't then, you shouldn't try. (Participant #12)*

Compensating for differences in capacity and experience was a concern for the most experienced participants. As discussed in 'Administrative and Policy Constraints', weaknesses in the organizational structure for those EPs who are less experienced or compromised may contribute to greater stress that may leave some EPs at a higher risk for burnout.

Reports that participants need to push to their edge to ensure patient safety may also indicate that the normalization of coping with the excessive workload in tandem with constraining policies and limited resources. Research on coping of Canadian EPs suggested that they predominantly use negative coping strategies (Howlett et al., 2015) and that those who used task-oriented rather than emotion-oriented coping had a decreased risk of burnout. Participants report that "cutting corners" contributed to stress brings into question Howlett et al.'s (2015) findings that task-oriented coping has a negative correlation with stress. Other burnout literature has suggested that individual factors do not have a significant impact on the likelihood of burnout (Maslach et al., 2001). Emotion-

oriented coping was suggested to have a positive correlation with stress in Howlett et al.'s (2015) however emotional responses to stress were described by some participants as very helpful.

*He died at [---] camp right. he had a little cold and he died in cardiac arrest. and we worked on him and worked on him and it was just so sad. and that week we had like three cases or five cases like that and I remember I just went to the nurses station and balled my eyes out. It was just a seven-year-old kid it was just wild, it was overwhelming. And then you have to pick up the next chart and see someone with an ingrown toe right? You know the transitions, its surreal sometimes. I just balled my eyes out. I think everyone balled their eyes out. For me I just released [it]. (Participant #13)*

Just as there may be stress associated with task-oriented coping when it came to over-efficiencies and there were also narratives of emotion-oriented coping, like this one, where emotion-oriented coping was identified as helpful and a deep relief.

There may be a cumulative impact of workload, administrative constraints and necessary stressful efficiencies on participant stress despite studies that suggest individual factors are less significant. Self-awareness, perspective, and experience may be mitigating factors in the safety and effectiveness of cutting corners that are not evident in quantitative studies.

### **Coping Contributing to Occupational Stress Conclusion**

When EPs must sacrifice self-care to ensure patient safety there is an imbalance in responsibility for patient care. The resiliency and high grit of EPs may endanger themselves and their patients. Cutting corners in their own health or in their work was identified as stressful and may have implications in burnout. Individual change may be helpful and organizational changes that aid EPs in avoiding the pitfalls that require them to cut corners in their work may be the best solutions and may reduce burnout significantly (Panagioti et al., 2017; West et al., 2016). If hospital administration and policy makers work with EPs it may both decrease stress and increase positive change that supports EP health and also structural integrity.

## 3.2 SECTION SUMMARY

### **THEME: Perceptions and Experiences of Occupational Stress**

- 3.2.1 Multiple resource constraints and heavy workload were identified as stressful but were not always associated with burnout and were sometimes associated with engagement. Insufficient training was identified by some as contributing to stress as was the impact of changing personal needs as a result of age and gender related constraints and a lack of resources to address them.
- 3.2.2 Administrative policies and practices such as; lack of administrative support and policies that protect physicians may impede best practice and put excessive burdens of responsibility upon EPs. Organizational limitations, such as FFS were perceived by some as contributing to stress.
- 3.2.3 Challenges with support staff, other doctors and a limited working relationship with hospital administration were identified as impacting their work life, work and personal relationships and stress levels.
- 3.2.4 While sacrificing self-care, a lack of breaks or sleep, and isolation were identified as contributing to the stress, EPs identified using coping strategies to negotiate work challenges, balancing requirements and working to avoid any negative consequences. EPs also reported requiring coping strategies that some literature has suggested contributes to burnout but which was reported as effective and necessary.

### POTENTIAL IMPLICATIONS

- Resource constraints are implicated in occupational stress but not always in burnout.
- There are impediments to structural support because of constraining policy and administrative impotence.
- Professional structural impediments and professional culture encourages a reluctance toward stress management and training for ancillary skills may be a contributing factor in addressing occupational stress.
- Stigma attached to maternity leave adds stress to leaves as well as a fear of a loss of skill as there are insufficient resources to support returning parents from Maternity leaves.
- Stigma associated with a perception of weakness by seeking help may add stress in addition to workload stress that may be implicated in higher risk of burnout for EPs.
- Whether task oriented or emotion oriented, coping strategies fulfill the function of negotiating challenging situations and talk-oriented may be implicated in burnout.
- Cutting corners and sacrificing self-care are task-oriented coping that both mitigate stress and contribute to it. Coping strategies perceived as functional and necessary in the short-term were perceived as increasing stress and have been implicated in burnout.
- Some EPs can negotiate coping strategies that may contribute to increased stress and find ways to negotiate around difficulties these may create however they fear for their patients' safety and for EPs with less experience who may not "cut corners" safely. Self-awareness of the edge upon which they work aids some in avoiding overstepping their capacity.

### 3.3 Protective Resources, Protective Coping and Engagement

This section gives an overview of EP conception of health and wellbeing, perceived support from relationships and administration, as well as the coping strategies used and engagement reported in their work. Participant conceptualization of health and wellbeing focused on good relationships, work preparation and self-care. The most important and meaningful source of support identified by all participants were the protective relationships they cultivated with fellow EPs (n=15). Personal relationships were also often supportive (n=9) and relationships with ancillary and nursing staff were predominantly supportive professionally (n=6). A few participants also identified support from administration (n=3) and counselling services (n=3) as useful resources. At work, protective coping identified by participants were; being highly organized (n=11), having awareness of and making changes in stressful personal coping strategies, and effectively negotiating unacceptable structural impediments. Outside of work, self-care activities such as exercise, eating and sleeping well (n=10) were coping strategies identified as helpful in managing stress. Supportive resources and coping were identified as helpful to participants. Over half the participants also identified engagement as a positive state that arose in their work (n=8). In this state participants reported working well with others, perceived competency in overcoming challenging situations and a feeling of flow, where no coping was required (n=8). Participants sometimes described thriving from stress, or that they do not experience stress.

The following sections discuss the definition of health and wellbeing, relationships, various supportive resources, coping methods reported by EPs that may shield them from stress, as well as a discussion of the participants who experience and perceive themselves to have a lack of stress and a deep sense of engagement in their work.

#### 3.3.1 Defining Occupational Health and Wellbeing

Occupational health and well-being was a concern to most participants. Definitions of the concepts focused on the capacity to achieve balance in one's life and take advantage of the wellbeing their work gave them. Having perspective of their responsibilities and balancing work, family and personal time for self-care were reported to aid in experiencing wellbeing. Other participants focused on how their wellbeing was very high despite concerns they have with challenging aspects of their profession.

*I've had to add in things like yoga, meditation and improving quality of like friendships and connections at work and outside work and I think adding in those other elements really helped and reduced my stress.  
(Participant #9)*

*I think the historic burnout patterns in emergency medicine are higher compared to many other careers. I think*



*it illustrates that it is a big issue with emergency medicine and sustainability on a system-based and individually for emergency medicine practitioners. So in terms of my health, I think the job takes a certain toll. In terms of my well-being, I actually think I'm doing fine. I think most people would classify well-being as more sensitive and health as being less sensitive but in terms of my well-being, I quite like it. I like shift work. I like the unpredictability of the hours. But I do think that it engenders unhealthy behaviors (Participant #8).*

At the same time that the pressures of their job continue, most participants, both the men and the women, young and old, described enjoying their work. There has been some support for this finding as although physicians love their work (high job satisfaction) that does not stop them from being at risk of burnout (Arora et al., 2015; Bragard et al., 2015). Although this did not preclude some of them from expressing a desire to minimize ineffective policies and the accompanying stress, most participants mentioned loving their work (n=9), feeling they could negotiate the challenges of their job (n=14), and described themselves as engaged even during periods of their career when some also described themselves as burnt out (n=1).

### **3.3.2 Protective Relationships**

All participants mentioned how important the relationships at work and at home were in relieving stress and contributing to their wellbeing. Support from fellow EPs was mentioned 35 times from all 15 participants and was the most talked about theme after workload stress. Participants cited their relationships with other EPs (n=15), nurses (n=6), patients (n=5) and their personal relationships (n=9) as being of significant support in their work. When asked how they cope with stress, supportive relationships were reported by all participants as important. As discussed in the section on challenging relationships, a lack of social support is a known predictor of occupational stress in emergency care workers (Van der Ploeg, Kleber, 2003; Adriaenssens, De Gucht, van der Doef, Maes, 2011). In contrast, positive social support among colleagues has been shown to facilitate physician recovery, particularly after a confrontation with traumatic events or occupational hazards (Ozer, Best, Lipsey, Weiss, 2003; Hamaideh, 2012). The following section discusses the different ways that participants reported gaining support, both at work and at home. They described this support as reducing the stress they experienced and contributing to an increased sense of wellbeing, connection, camaraderie, support for perceived errors, support for leaves of absence, work place support and sense of purpose. This is supported by previous findings that team-based approaches and a supportive work environment enhance support for physicians and has a positive influence on physician wellbeing (Wallace & Lemaire, 2007). Wallace and Lemaire's 2007 study also suggests that social interactions shielded physicians from work overload and emotional demands, and positively influenced physician well-being. Many authors have suggested that social support is one of the best

coping methods and this was supported by participants in this study (Bakker et al. 2004, Glasberg et al. 2007, Lindblom et al., 2006, Prins et al., 2007). The extent of support experienced by EPs through the relationships they developed with colleagues, patients, and spouses was reported to have a positive impact on reducing stress and contributing to wellbeing.

### **Protective Relationships with EPs at Work and Outside the Emergency Department**

Debriefing, camaraderie, and connection with fellow EPs were reported to be particularly supportive for all participants (n=15). Having a shared understanding was particularly helpful because they could understand each other without explanation. One participant said,

*...without having to explain why this needed to be done, or that needed to be done, or why it was difficult to do things, he instantly got it, and so it's a source we can share, and he is going through the same thing... as he's working through the same thing for several hours too, so we can kind of share that stress. (Participant #4)*

Participants found confiding in each other at work helpful in reducing stress and contacted each other from home for informal debriefs. Participants described meeting with colleagues as a group outside of work to help decompress, as well as learning and growing professionally in a confidential, open and safe space. One participant described a regular meeting with colleagues in the following quote,

*We go hiking and... just joke around and bitch about work... it feels really good when we talk about it; "Why is this case, blah blah" and "I'm feeling really horrible, and I missed something." And you talk about it, and they'll say; "Ya, I wrote it down exactly the same thing." Or someone will say, "Ya man, pull your socks up, you can't screw that up." You know we're just kind of honest with each other. (Participant #2)*

Two other participants identified hunting or going to a gun range as reducing stress and connecting with other EPs. One said,

*I'm into hunting so there's another couple guys who go hunting and we'll go to a gun range and go shoot. And it's a way that we can still ... † when we're there we'll talk about cases that we've had, but now it's in a fun environment, and we're trying to get to know each other better and deal with the and talk about the stress of work. So it does positively ... it sort of pulls people together. (Participant #5)*

Socializing was described as an important factor in stress reduction. Getting support from colleagues immediately or outside of work for debriefing was also described as relieving stress and an important normalized part of their work life. One participant said, "Like one of my colleagues that I work with actually called me tonight saying I need to debrief, I think I messed up, and actually I haven't talked to them yet." (Participant #6) Another participant reported that s/he experienced a sense of community when all the physicians in his/her department covered 20 shifts in less than a day for a colleague who needed to go home for two months to care for his/her ailing father.

*One of the physician's [parent] found out he had a diagnosis of terminal [---] cancer and that he wants to... take two months off... he wants to do it now, and he had something like, something like 20 shifts to cover,*

*and they were all covered within 12 hours. (Participant #1)*

In all the interviews, the common theme is that EPs find support in each another. This again supports previous research in Canada suggesting that establishing team-based approaches and a supportive work environment enhances support for physicians and has a positive influence on physician wellbeing (Wallace & Lemaire, 2007). EPs discuss their work, debrief, get emotional support, work related help and professional and personal understanding in their relationships with colleagues, both at work and outside of work. Colleague support from fellow EPs was an important protective factor reported by participants reported in reducing occupational stress.

### **Protective Relationships with Nurses**

Relationships with nurses and the ancillary staff were also reported by participants as supportive (n=6). Relationships with nurses and ward clerks were identified as important, accepting and critical to reducing stress for EPs. Their help with the fundamentals of EP work was identified as invaluable, and it supported their ability to function and reduced stress. One participant said about a charge nurse on shift,

*She's kind of in charge of the whole department, and she's an experienced nurse. She knew exactly what was going on, and I felt tons of support from her. I could see her visibly running around the department working her butt off trying to make things happen and trying to coordinate getting back the information that I needed, and I was chatting with her all the time back and forth. So I felt lots of support from that. (Participant #4)*

Many felt that comfortable working relationships with nurses and support staff made stressful situations easier to negotiate.

*Actually, at work there's lots of support; there's nurses and unit clerks, and then there's all the technicians that help us. And then as a physician, we're surrounded by people who are basically paid to help us. (Participant #6)*

Participants recognized and appreciated the professional support gained from the support staff there to help them complete their work. No participants reported a lack of support staff. They were supported by their professional alliances with nurses and reported that a strong nursing staff reduced the stress they experienced in their work. Participants identified difficult relations at work as one of the most stressful parts of their job because it is essential to have support to do their job. Although they did not expect any emotional support for the weight of responsibility they had, having nurses and ancillary staff help with the professional side of their work was reported to reduced occupational stress.

### **Positive Relationships with Patients**

As well as the support gained from nurses and other doctors, EPs also gain support from the patients and their families (n=5). During the workday, speaking with patients and their families was mentioned as both a way to remain inspired and connected with the work as well as a form of support. One participant stated, “You know I actually get a lot of strength from the families too. You know the family members that are there with the patients.” (Participant #3) Another participant said,

*I really try to find at least one encounter where I feel like I've made a connection to the patient and I understand why, really why, they're here and what they're about and what they really need and there's a human to human contact or connection that makes sense. Like that person has had their concerns, fears, pain positively dealt with by interacting with me. I've made a difference to them. Because sometimes I've found when, you know, this is four or five six years now since I've tried to do this, it just felt like I would just drift through as a factory worker. (Participant #11)*

Participants identified connecting with patients as having a positive impact on their experience at work. There was a positive difference when participants could connect with their patients that created community and a sense of meaning in their work. The support experienced through connections with patients has been reported in previous studies. “The secret of caring for our physicians is in their care for their patients because they receive care through the compassionate care-giving they do (Adler, 2002; Lee, Brennan, Daly, 2001). Positive connections at work with patients, nurses and fellow doctors were identified as contributing to the participant wellbeing.

### **Relationships with Spouses and Family**

Strong relationships with spouses and family were also described as an important way of dealing with the stresses of work (n=9). Debriefing with family and spouses outside work was described as an essential way of decompressing and reducing stress for many participants. Getting support at the end of the day from spouses was repeatedly cited as deeply meaningful and supportive. The importance of spousal communication was described by one participant, "My [spouse] is a physician too and that can be difficult at times but s/he can understand that stress and so s/he's a huge support for me." (Participant #4) An EP whose spouse was not a doctor also found solace in the relationship, saying, "I like to chat about stuff and thank goodness I've got a healthy relationship with my spouse." (Participant #3) A number of participants identified communication with their spouse as an important way to alleviate work stress. As discussed in the section on challenging relationships, the absence of this support was reported as equally stressful.

### **Protective Relationships Conclusion**

Both personal and professional relationships were identified as lending support to EPs. The support gained was different from the different types of relationships. EP support was mentioned numerous

times (n=35) from all participants (n=15) and was a significant support both personally and professionally. Spouses were also reported to give substantial support to participants who had them. Although patients, nurses and ancillary staff were not as essential, they were appreciated and the lack of support from them was felt as discussed in challenging relationships. When these important supports with spouses and colleagues are lost it may have a significant impact upon EPs. In the section on divorce and the inaccessibility of coping strategies, in section 3.4 on burnout and coping with burnout, this will be further discussed.

### **3.3.3 Administrative Support and Counselling**

Structural supports, outside their social support and their own individual coping strategies, were identified as minimal. There were impediments both to administrative support and counselling support. That said, there were some positive reports about these institutions of support.

#### **Administrative Support**

There was minimal administrative support for EPs reported (n=3) despite this many participants did not expect to have support from administration (n=7). When participants did identify helpful administrative bodies like the Canadian Board of Medicine and administration these were often offered with caveats. For example, one participant explained that when s/he wanted to implement a new initiative to combat the challenges they face in their work, administration was open to implementation of their initiatives but this didn't address the overarching issues.

*Admin in one of my workplaces has been very receptive on looking at initiatives that have come from the emergency department that have tried to deal with the influx of patients within the confines of the financial or geographical space that we have provided. And those are novel programs that bring care to the waiting room or need extra nurses or different kind of interview process and things. So... hospital admin has in the past looked at a few of those things but really what it boils down to is that we see more patients in smaller and less well-supplied care spaces. (Participant #11)*

As this quote demonstrates, although there is support from administration, it is described as limited by the continual resource constraints physicians combat. The perception of the Canadian Board of Medicine and administrative aid was minimal and support reported was that which could be implemented without any change to policy or administration at the workplace. This may be in large part because administration is not there to support EPs as they are not employees of the hospital but independent contractors and therefore to a great degree do not look to administration for support.

#### **Counselling**

Counselling services associated with the hospital were used and advocated by a few participants (n=3) but avoided by others also (n=2). After a divorce one physician identified getting help from counselling as particularly helpful. Another participant explained that after a traumatic event, when

the impact of the stress was more than what could be relieved through dialogue with friends and family, they sought out counselling. A few participants mentioned hospital wellness programs and counselling and psychiatric support available. One said,

*I think around that certain incident, that specific incident, that was really helpful to have that avenue because of course my close friends and family and my boss as I mentioned were very supportive in the immediate term. I kind of couldn't keep using them as my sounding board for that long you know... we have... employed family assistance program, so they provide counselling and psychiatry for physicians in need... I saw them for quite a long time. I don't anymore but for like a couple of years I went regularly. (Participant #6)*

Counselling was identified by several participants as an essential support that has the potential to manage the difficulties that arise in EP lives, either professionally or personally, that might impact their health, wellbeing and ability to do their work. Although most participants reported gaining support from their relationships when these primary supports fail counselling was reported to lend valuable additional support. The drawback for counselling was its lack of confidentiality (n=2) and the drawback of administrative support was how limited they were in advocating on behalf of EP needs (n=6).

### **Conclusion Administrative Support and Counselling**

The resource reported to be most meaningful overall for participants was the protective relationships they developed to support them. The institutional supports were reported to be less necessary than the protective relationships that participants identified as reducing stress, contributing to greater competency and contributing to their overall wellbeing. It has been suggested that it is through structural support rather than a focus on the individual that may best address risk for burnout (Arora et al., 2013; Maslach et al., 2001, Michel, Sangha & Erwin 2016; Panagioti et al., 2017; West et al., 2016). For participants, their supportive relationships were identified as a protective factor while administrative and counselling were less effective in giving support or being protective situational factors to combat stress.

## **3.3.4 Protective Coping**

### **Personal Health-Related Activities**

Participants reported coping strategies to prepare for and recover from their work to reduce the impact of stress. Coping strategies that were identified as reducing stress by most participants were eating well, getting a good sleep and taking time off (n=10). "I was actually able to take a couple days off after so that was good. I do a lot of yoga. I run a lot... for me [to be] able to check out a little bit... out of this world, is good for balance." (Participant #14) Coping strategies were reported to

minimize stress experienced at work as well as being an essential source of recuperation from the stress of their work. In one longitudinal study of coping with stress, proactive coping like these were suggested to have a positive impact on reducing stress (Rowe, 2006). Respondents in Rowe's study reported having a stronger sense of personal accomplishment and were less emotionally exhausted (Rowe, 2006). Exercise was identified by many participants as a protective factor alleviating and minimizing occupational stress as a way that they were able to regroup, decompress and relieve anxiety after work. One participant explained;

*Exercise is a big one for me that would be one thing that [is important] for a lot of us. There are a lot of extreme athletes in the emerg. I think that's part of the reason. People have a lot of stuff to sort of let off. I'm not an extreme athlete but... it's a big, everybody, mountain bikes and skis and runs. Just sometimes it's to a ridiculous intensity. It's a little over kill. There's a lot of overachievers, but I think it's also a way of balancing that. If you took me and told me I couldn't exercise and do something else, I think I'd find this job impossible, but I think it allows it to be." (Participant #14)*

While exercise was reported to be a support there was awareness that it could also be taken to extremes. Exercise was described as sometimes being used to excess in order to cope with the stresses at work. The extremes in coping strategies may suggest that EPs level of grit is high and that the excess of coping is an example of the high level of resiliency or grit, while also showing that they are on the edge even in their coping strategies. Grit may be as much a risk factor for burnout as it is a protective factor when stress is low and recovery is possible. In a recent study on the impact of grit in reducing burnout in emergency physicians, grit was predictive of well-being when measured by the Emotional Exhaustion and Depersonalization subscales of the Maslach Burnout Inventory (Gaeta et al., 2017). As many EPs do not burnout who are subjected to the same situational factors, the susceptibility of EPs in pushing the boundaries beyond their capacity when engaging in coping or recovery strategies may influence burnout in some.

Taking time off to recover from their work was identified by many participants as essential in order to come back to work. Most EPs discussed the benefit of being social outside of work. As discussed earlier, engaging in stress-relieving activities helped recovery from the stresses of their job. Many described controlling the number of shifts worked each month to avoid burnout. Among cardiologists, who also have high burnout rates, reduced work hours have been suggested to mitigate burnout (Michel, Sangha & Erwin, 2016). Many participants also described going away on vacation frequently or doing a minimal number of hours required each month. Self-regulation through the reduction of hours worked was identified as an important proactive coping strategy to mitigate the stress experienced at work. One expressed this in the following way,

*[I] do things to try and mitigate it [burnout] so I'll try to get better sleep and like exercise and then take some time off. So then I know that I'm good because even [after just] a week off I come back and I feel refreshed. (Participant #2)*

Taking time off was reported as necessary to recover from the stress experienced at work. Physicians' ability to choose the number of hours worked and having short shifts have been one of the ways that Canada and other nations have changed policies to protect physicians and patients and reduce stress (Pattani, Wu, & Dhalla, 2014). Personal health-related activities, socializing and controlling their work schedule were perceived as a necessity to minimize the impact of their work stress on their life. This necessity of EPs individual actions to control, reduce and recover from the stress they experience in their work may suggest the expectation that it is through individual intervention rather than structural changes that EPs must reduce and address the stresses that may be inherent job characteristics. Personal care was reported to aid in buffering them from the difficulties in their work, and they were aware that a lack of personal care may influence their ability to function adequately. However, participants also report that sometimes supportive coping strategies, when taken to extremes, may become maladaptive. This may suggest there are limits to depending upon individual strategies in addressing job stress.

### **Protective Coping at Work**

Several proactive coping strategies were identified as reducing participant stress. These included scheduling breaks for personal needs, communicating with administration about self-care needs, and being self-aware of their personal needs and priorities while working a shift. One coping method mentioned repeatedly by most participants was being organized and prepared for shifts (n=11). When addressing the issue of a lack of resources and overwork a high degree of organization was reported to be an important strategy for reducing stress and lowering the risk of error. Participants said keeping their job in perspective, being hyper-organized, making a plan and having careful notation were perceived as making their work possible and alleviating the stress of their job. One said,

*I keep lists; I have particular piles. I have a specific way of notating things so that at any moment... because you have to constantly switch back and forth, and you can't like necessarily finish a task or a thought process because you're constantly being interrupted; so being organized and writing things down. (Participant #1)*

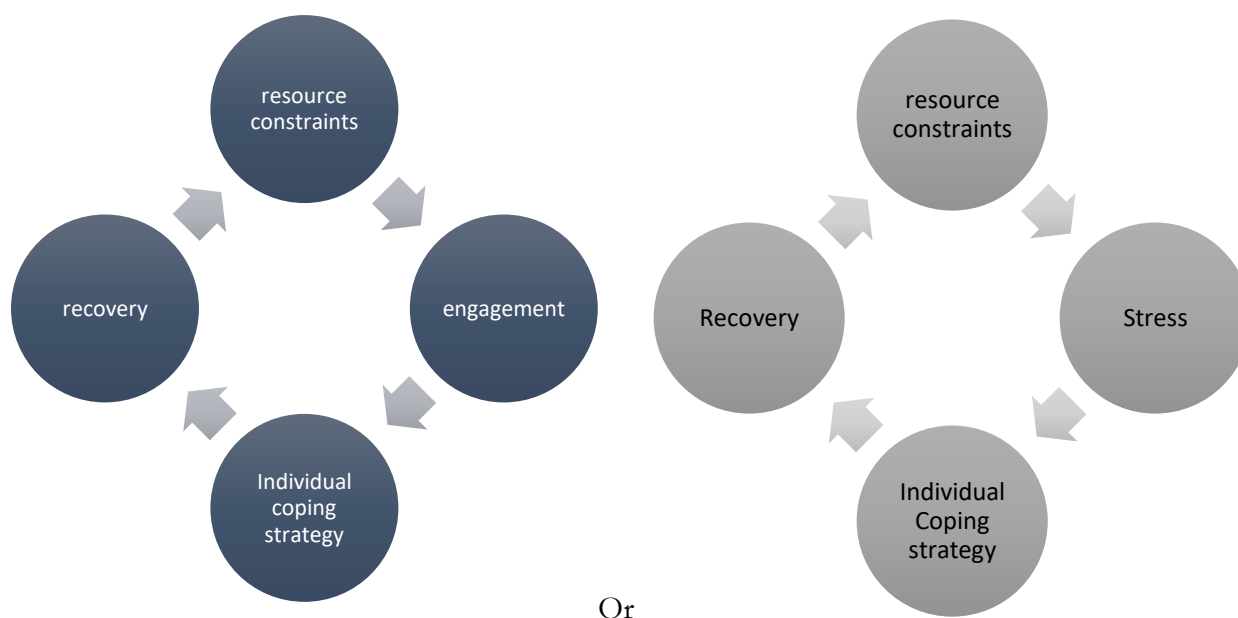
Another protective coping method that was consciously reactive rather than specifically proactive was in the unorthodox negotiation of resource discrepancies with administration. One participant described a negotiation process that included a threat to administration to go to the press and informing them that if they did not find more beds they would have to send all patients to another hospital because this hospital was now at capacity. This participant described the strengths and



weaknesses of this strategy to meet the needs of the department. The EP said,

*So what I do is I call that administrator and then, just, you know, a nurse works in the hospital at night-type thing, and I tell her that I want to talk to her boss. And I end up talking to somebody at [blinded for confidentiality] who doesn't know anything. And then I tell her I want to talk to her boss. So I get to the top and I say "look, I'd like you to either call the ambulance service and tell them 'no more patients here' because it's not safe", or "call the press and have them announce that it is unsafe in the department now in the ER for next few hours." But of course, they won't do that. They never do that. "Or get me some beds." And, pretty much 100% of the time, all of the sudden, there's a ward that's opened up, and it's 2 or 3 in the morning, and I have to go through this dance every time. (Participant #12)*

The negotiation of resource constraints and unsupportive policies by this EP avoided the consequences of resources constraints in the short term. The drawback of this strategy is that it will not enact a permanent change to the systemic issues that created this situation. This participant was not debilitated but remained frustrated with the lack of resources. Because of their extensive experience and an individual-based approach the participant was able to receive better care for their patients and reduce their experienced stress. In this case, this may lend some support to Howlett et al.'s (2015) findings that task-oriented coping is associated with lower burnout. However, having to go through a time consuming 'dance every time' was also reported as a source of stress for this participant and one that this EP said many of his/her colleagues were unwilling or unable to undertake. Again dependence upon short-term individual intervention rather than systemic structural changes may reduce the impact of positive change but fails to address the underlying structural problem raised in this quote and by other participants, that impacts EP efficacy and stress.



**Figure 6. Individual Coping Strategy Risks**

Whether the EP engages and finds a positive solution or struggles through the underlying stressor of resource constraint is not addressed systemically (figure 6).

On the other hand, the perceived level of engagement in the above quote also mirrors what has been identified in the literature as a potential strength. Active engagement, such as that demonstrated above, has been associated with positive outcomes, such as system change and increased wellbeing and confidence (Seligman, and Csikszentmihalyi, 2000). This example may also demonstrate the aspect of hardiness, grit or resilience that is a protective strategy, which has been associated with lower risk of burnout (Kobasa, 1979; Gaeta et al., 2017; Maslach, 2001). Despite possible long-term consequences of a failure in policy or administration to attend to the needs of the department without, in this case, a threat, this participant's ability to negotiate the situation may explain his/her lack of burnout after a long career. It may also point to the differences in ability to negotiate workload constraints as a result of greater experience and confidence.

Many participants described gaining satisfaction from advocating and being active in care and the mobilization of change when it worked. As was described in the Howlett (2015) study, physicians in this study, who described themselves as having good coping strategies, did so by analyzing the circumstances and their capabilities and developed an action plan, so that even their reactive coping was proactive. Addressing stress of work through personal change rather than expecting structural changes was identified by many participants as necessary. Taking personal action compensated for the lack of perceived impact on a structural change they could implement as EPs or department head's, as discussed in section 3.2.4 on 'Coping Contributing to Occupational Stress'. Another one of five participants who raised this topic explained the personal changes required to compensate for constraints:

*You need to back off from this committee or that committee. Just sort of stop and rethink and make sure you're, you know, doing your job the way you want. (Participant #4)*

Reducing work commitments was described by most EPs as a proactive coping method that was essential and effective in reducing stress. Changing behaviours was reported more often than changing structural inadequacies. Although EPs did discuss ways they attempted to change structural or policy issues or solving difficult relationships the majority of solutions were found through self-regulation and the actions they took to ensure they were taking care of their needs.

### **Protective Coping Conclusion**

Time off, self-care outside of work, and being organized were helpful ways of negotiating the heavy work load. At the next level having the confidence of an experienced EP and negotiating the

parameters of policy to ensure patient care by forcing administration to cut corners instead of themselves was a helpful negotiation of workload stress that demonstrated the intensity of the workload and the strenuous negotiations required to cope with the work of an EP.

### 3.3.5 Mindfulness, Engagement, and Self-Awareness

#### Mindfulness

There is a growing body of research into how mindfulness might help reduce stress in the workplace as well as shield workers and particularly physicians from burnout (Chung, 2015; Dobkin & Hutchinson, 2013; Ireland et al., 2017; Ludwig, & Kabat-Zinn, 2008). Perspectives on the relevance of mindfulness and EP experience was therefore inquired upon in this study as a possible intervention that might encourage engagement and reduce stress. Studies on mindfulness have been at the forefront of studies on stress interventions recently in Medicine (Chung, 2015; Fortney et al., 2013; Ireland, Clough, Gill, Langan, O'Connor & Spencer, 2017; Pflugeisen, Bethann, and Mundell, 2016; Song & Lindquist, 2014). There were a variety of perspectives on mindfulness. While participants reported that it might be useful (n=8) they also were concerned that it might be interruptive rather than helpful (n=9). They were not as a group either particularly for or against it but were unsure of its efficacy or of possible implementation. It was an ideal for some that was appreciated in theory.

When asked if mindfulness would be useful at work one participant stated, "For me mindful is a peaceful state. You know it's... peaceful. Whereas when I'm at work, and I'm attentive, I'm not peaceful because I'm stressed. So, if I could achieve mindfulness it would be - to be that attentive but also be at peace." (Participant #6) For this participant bringing a peaceful state into his/her work was seen as ideal. Another participant described the experience with mindfulness practice and frustration at the lack of mindfulness practice in the workplace.

*And it just kind of surprised me how different my life could be when I started using all these different techniques of coping and so I think so for emergency physicians it needs to be reiterated a little bit more. Like there is a physician well-being group but I think it's just a penny in the bucket really to be honest. (Participant #9)*

This participant found a mindfulness practice to be useful for him/her and that it might be useful if taught to students and residents but also reported it as insignificant when faced with addressing EP stress. This has been supported in one study on mindfulness that suggested mindfulness seemed to be suitable for preventing burnout in its initial stages (Montero-Marin, Tops, Manzanera, Piva Demarzo, Álvarez de Mon & García-Campayo, 2015). It has been suggested in some studies that individual strategies such as mindfulness meditation may help with emotional exhaustion but that

they do little to address the other two dimensions of burnout; depersonalization, and inefficacy. (Arora et al., 2013; Fortney, Luchterhand, Zakletskaia, Zgierska & Rakel, 2013; Maslach et al., 2001) On the other hand, a recent randomized controlled trial of the impact of mindfulness on nursing students had positive results (Song & Lindquist, 2014). This participant also said that overcoming possible cultural barriers in medicine may be a challenge to encouraging stress management techniques in emergency medicine.

*It's more about learning how to de-stress while at work... so you can engage and be mindful while at work. I think mindfulness training, like meditation...I think mindfulness training, like meditation for sure, could help people become more mindful at work and maybe if we started it with residents and they would continue to staff but I think the main issue with that is when you're a resident you're sleep deprived. We instill this, it's in our culture. We sacrifice sleep which is one of the most basic things, right? I mean you take away sleep, how can you expect residents to meditate? Like, they just don't have time for it, you know like there's no time in their lives but at the same time. They have time to go out and drink and party and that's what they're using to cope and they're all doing it. (Participant #9)*

In this case, the efficacy of mindfulness was less the focus than the perceived cultural impediments. Coping strategies that might encourage engagement or coping strategies in this professional culture was described as unreceptive even while this participant saw potential value in mindfulness practice for him/herself. In Dobkin and Hutchinson's 2013 study of residencies that teach mindfulness practice, there was evidence that pointed to the usefulness of mindful practices but implementing and imparting a value was unclear. Another perspective was that mindfulness was not a skill that one could learn but that it was innate.

*I think you are mindful by the time you are eight years old or not. It's a part of your upbringing. It's who you are. You can't teach somebody to be kind, and mindful and aware. You know? You are that long before you go to med school. (Participant #12)*

Some participants also said that while they would appreciate being mindful in their work, many said it was either a pleasant but unrealistic ideal that may "impede best practice".

*"Well if I spent too much time thinking about how I'm thinking and what I'm thinking and my environment I would never get my job done. I'm not sure if that's really what mindfulness is but it's a part of it." (Participant #1)*

Mindfulness as a proactive coping method was used by a few, others felt they might benefit from such an intervention while others did not feel they needed such an intervention. Participants who used it currently suggested educating residents and EPs on its scope and potential benefits but also suggested there might be cultural barriers to implementing such an intervention. Participants had conflicting perspectives that suggested that mindfulness both as a concept and a practice may be challenging to implement and may not address the immediate challenges they described as important.

## **Engagement**

*Well, it's just like when you hit the - you ever play baseball? You hit the ball and you get that twang in the bat. That's what it's like. You know things are cookin', you're working with a team, depending on it's a resuscitation or dealing with individuals, it's all about I practice with a lot of gestalt. (Participant 13)*

Some participants, like the one in the above quote described engagement as antithetical to burnout and a state of presence and vigor as Leiter and Maslach (2005) might have expected. However, being engaged in the intensity of the work was not described by participants as being in opposition to stress or stressful situations. EPs described engagement as occurring during stressful times but without reactivity present. Engagement was the absence of stress and the experience of ease during experiences that might be perceived as stressful. For example, one participant described a situation with a four-year-old child who was dying as a result of an assault. This was reported to be a stressful situation while at the same time deep engagement and wellbeing was experienced.

*So you have to, and to be able to, kind of, begin communicating with the family in a hopeless situation. Which became kind of apparent in the first 20 minutes. That was- it was my own... it was very stressful. But part of what was compelling was just the humanity- the parents and particularly the mom. To relate with and to engage with. And to share emotions with. To share clinical reality but also that human factor. It was actually important to them, but it was also important to me... In retrospect, it was a big event and therapy for me as well... And all of the sudden you deal with family. And that could be seen as a challenge or something that's very therapeutic for us as well... Making time for that always seems to be a little bit challenging sometimes, but it's invaluable. And it's repairable. We should do it. It's also important for us. (Participant #10)*

Sometimes, like the quote above, participants described themselves as engaged with their patients and in their work at the same times that they reported feeling stress (n=7). The next quote describes a similar stressful situation where support received changed the perceived experience from stress to engagement.

*...And everyone was like amazing, but it was funny because I was so stressed and one of the nurses said, "so what's your plan for this guy?" and I just was like, "no, you cannot come and ask me that right now. Look at the board. I was like; "absolutely not." And then all of a sudden it was just like everyone stopped doing that, and everyone said, I did this for you. Oh okay. And everyone made it this and then it wasn't so bad. So I think just like saying my stress level is really high was actually useful... it was funny I was thinking to myself, "why don't we work like this every shift?" anyway, I just remember thinking that. It could happen if it needed to be done. (Participant #2)*

This participant described how even in stressful situations engagement occurred when s/he experienced the support of the people around him/her. This is supported by studies that suggest burnout and engagement are negatively related where engagement is predicted by job resources while burnout is predicted by job demands and a lack of job resources (Schaufeli, & Bakker, 2004). A situation which may generate perceived symptoms of occupational stress were perceived to be averted by support. Further examples of engagement were expressed as arising from having an energizing and beneficial team. One participant described being engaged as a result of the

camaraderie and team spirit in his/her work environment,

*A good team, everything sort of goes according to plan. And the pieces start to fall into place quickly... The team and your teammates are equally part of that... That feels pretty good. It's pretty energizing. You want more of that. Bring on the next one. On the other hand, if you haven't had one of those in a while, then you are a little apprehensive about the next one. (Participant #12)*

Many of the participants cited active engagement in the act of working as an important way that they reduced stress in their lives in general. Some saw their work as stress relief because their work was a source of peace in their lives. One participant said:

*Even though I've said negative things about emergency medicine, it is still something that I felt I had been compelled to do... and here it sounds corny too, but emergency was really what I knew I wanted to do. I don't know why but I did and so I... the, the patterning, the, you know, in a way it was actually helpful for my own mental... I'm going to call it anguish. I don't want to be too dramatic, it was helpful in that way, and the more stressful or, the more chaotic it is, or was, the better. (Participant #11)*

Again, the perception of engagement was identified here as occurring because of the 'stressful' or 'chaotic' situations they encounter. This perception may suggest that engagement and burnout are not antithetical (Maslach et al., 2001; Schaufeli, & Bakker, 2004). That one perceives being engaged does not necessarily indicate that the participant isn't also experiencing stress. A few participants described always feeling engaged in their work and reported not experiencing their work as stressful over two or three decades of working as an EP. One of these said something similar,

*I work a lot. I'm a workaholic. I work a lot. I enjoy my work, love my work, and I probably work too much, but I do it because it makes me feel good too. And it sort of helps me deal with my inner demons and stuff right? All that stuff. So I think I have pretty good insight into that, who I am as a human being. (Participant #13)*

In this quote, the EP described how some participants never reported experiencing burnout during their career although they did identify as being a workaholic and struggling with their own issues. This participant was a senior EP and was one of the 10 participants who had been in the same marriage his whole career. S/he was enlivened by the work and yet described never having felt any significant stress at work. This seemed to be in contrast to the hypothesis brought forth by Pines (Maslach et al., 2001, Pines, 1993), where workers who are "on fire" in their work might be more likely to burnout because they have an idealistic perspective of their job and work. There was not a clear association in the participant interviews as some who felt engaged and on fire in their work as the older participants had never experienced burnout. This finding may relate to the high self-regulation, perspective on their responsibility and the 'OCD' personality trait this participant reported.

*I just think I went through some shit as a kid and it's just deal with one thing at a time right and you don't get too worked up about it. It's not my fault that someone comes in with a serious problem. People say isn't that stressful? No, I can't control what's coming through the door. You know I don't worry, I don't lose sleep*

*over that. I used to get more concerned about someone's blood work after the fact but I'm getting a lot better at crossing my t's. The OCD helps a bit right. (Participant #13)*

A recent study of Canadian physician well-being suggested there was a strong relationship between self-regulation and the dimensions of purpose in life and environmental mastery (Simon & Durand-Bush 2015). This study suggested that it was those who effectively self-manage that may predict psychological well-being. This may account for why participants often gave accounts of stressful situations that also demonstrated high resiliency and grit but which added stress. Many participants described experiencing high levels of stress in their work and home lives however they did not describe these as untenable or unexpected. For some this stress was reported to be comforting or helpful but it may also take them out of balance. Self-regulation may be one difference between those highly resilient EPs who burnout and those who don't.

Some participant narratives were of finding strength in their work and a sense of peace in overcoming any difficulties. Being at work for some participants was described as a place where they could be "normal" and engaged.

*I felt like I was going through a dark period of work, or coming to work not prepared to work, or not able to work, but like I said I actually found work was a period where I could be normal. (Participant #11)*

The data suggested common individual and situational factors contributing to stress, but it was clear that some EPs perceived stress and engagement as compatible. This finding is supported by a study that suggests that associations with burnout are negatively related to engagement (Schaufeli, & Bakker, 2004). Where burnout mediates the relationship between job demands and health issues, engagement mediates the relationship between resources and intention to leave (Ibid). The study suggested that increasing engagement and decreasing burnout were two different things. This also may explain the finding in previous studies discussed in both Arora's and Bragard's review articles, (Arora et al., 2013; Bragard et al., 2015) as well as the current study, that suggests that EPs often love their work but still exhibit or perceive themselves to have symptoms of burnout or to be burnt out.

### **Self-Awareness**

Unlike the concept of mindfulness, self-awareness was described as a way of working that brought a sense of ease into their work reported by more than half of participants (n=8). Keeping the job in perspective (n=5) was a prevalent description ascribed to remaining at ease in difficult situations.

As briefly mentioned in maladaptive coping, awareness of their perceived negative coping strategies helped participants to change perceived maladaptive coping strategies. Self-awareness was reported to help change habitual coping strategies (n=8). Some expressed that it was reasonable and possible to self-care at work and create a new workable model for their professional culture. One participant

described having a realization that there had always been enough time to pee and drink and eat, they were just never aware of it.

*I think there is time to stop and we're just not good at doing it. So I do stop now. That's what children are good for. Pumping and all that, knowing that the department will not fall apart... I can take two minutes... if my kid wants face-time to go to bed... Nothing is dire, so those things are really big for me. And to stop and talk to a colleague for a minute and joke about something that happened last week instead of being like I can't chat I've got to go. (Participant #14)*

This participant identified that the habitual practice of ignoring personal needs was not as necessary as is a normative practice than could be questioned and changed. This mirrored the findings in “The Myth of the Lone Physician: Toward a Collaborative Alternative” (Saba, Villela, Chen, Hammer, & Bodenheimer, 2012) that suggests that the cultural values and beliefs are changing around the myth of physician singularity to self-sacrifice and hold the weight of sole decision maker. As was discussed in the constraining coping section, half of the participants regularly noted they often could not find the time to eat, drink or use the washroom during their shifts. This may indicate how personal change may alleviate some of the day-to-day stresses habitually experienced by EPs. In Saba et al.’s study (2012), models of care were often described as fragmented and physicians disconnected and unsupported but that there was the possibility of a paradigm shift (Saba et al., 2012). The perception that this participant could find time to recover may have positive implications for how small changes in behaviour at work may reduce stress and improve wellbeing. As was discussed earlier on self-regulation and perspective on the job, another senior participant described the necessity of self-awareness and perspective;

*I mean keeping my job in perspective is a huge part of it. Recognizing that I can't be everything and do everything and save everybody, and not ever make mistakes. If you have that perspective, then you could never function in this job. You have to recognize that that's part of the job, and that's part of keeping it in perspective. (Participant #1)*

Awareness of the situational factors that could become stressors and having perspective about one’s role and responsibility was a reported strategy for managing stress. Traumatic situations with patients were described as *not* stressful by almost all participants who ascribed their competency and perspective as protective. Self-awareness of the limitations of one’s responsibilities was identified as very helpful in reducing stress.

*Just deal with one thing at a time right and you don't get too worked up about it. It's not my fault that someone comes in with a serious problem. People say 'isn't that stressful?' No, I can't control what's coming through the door. You know, I don't worry, I don't lose sleep over that. I used to get more concerned about someone's blood work after the fact. (Participant #13)*

This was reiterated by many EPs, “events” were not perceived as causing them any stress. At least half the participants mentioned specific cases where the situation might be construed as stressful but



was not experienced as such. One participant noted:

*He just came straight in and there was a huge recitation and he died in our resus bay and there was a like a big, but I think it was because it was like a murder case and it was this big stressful thing and it was like his blood volume was lost between like the cruiser and like down the hall, like with him walking in with like his hand over his neck and that type of stuff so it was very dramatic and so there was a debrief about that but that case I didn't need to... I feel like I'm fine everyone did their job so I didn't go. (Participant #2)*

Dealing with patient trauma, serious injury and death was identified by most physicians, young and old, male and female, as part of the requirements of participant work and a part of what is expected and comfortable (n=8). Having perspective on what their responsibility was in the situation, or being able to step back from the situation, may be an important protective factor. This finding seems to be in contrast to previous findings that suggest that traumatic incidents such as serious injuries may be implicated in the higher levels of anxieties in EPs (Somville, De Gucht, & Maes, 2016). This Belgian study of emergency physicians suggests that EPs are vulnerable to post-traumatic and chronic stress due to repetitive exposure to work-related trauma and deaths (Somville, De Gucht, & Maes, 2016). Participant engagement and the absence of stress was often reported by participants as connected to whether they experienced themselves and others as having done their job, not how traumatic the patient's symptoms were or the outcomes. The perception that they accomplished what was necessary and their competence was suggested to be more important to their wellbeing than the state of the patient. Not only were they not stressed or burnt out but these traumatic situations, it might be suggested these challenges, when overcome, contributed to their wellbeing and engagement.

## **Conclusion**

Relationships with other EPs were identified as critical to their wellbeing and staff, family and patients were also identified as supportive in the experience of wellbeing for EPs. The data suggest that relationships may have a protective effect on reducing emergency physicians stress. As discussed earlier, when these supportive relationships are threatened, the data was supported by previous findings that EPs may be at risk for increased stress and burnout (Van der Ploeg, Kleber, 2003; Adriaenssens, De Gucht, van der Doef, Maes, 2011). There was minimal reporting of administrative support and counselling and although appreciated, it was not always accessible. Participants had conflicting perspectives on the usefulness of mindfulness that suggested that as a practice it may be challenging to implement and may not address the immediate challenges they describe as important. While engagement and mindfulness were identified as ideal states, self-awareness, self-regulation and having perspective on their responsibility were identified as protective factors. Self-awareness, self-regulation and perspective protected against stress as well as create space to question and change habitual coping strategies that impede best practice.

### 3.3 SECTION SUMMARY

#### **THEME: Protective Resources, Protective Coping and Engagement**

- 3.3.2 All participant EPs reported the support they give and receive from each other professionally and personally through mutual understanding, confidence and personal intervention as essential (n=15). Nurses are often also positive supports for EPs who reduce their workload and support clinical practice. Patients are reportedly a source of support in their reaffirmation of competence, creating community connection and bringing a sense of meaning to work. Spouses and family were also identified by almost all participants (n=9) as being an important pillar of support in reducing the impact of occupational stress.
- 3.3.3 Administrative and policy supports are limited. EP-led initiatives, such as a mandatory sabbatical were perceived by some as positive reduction in stress while others felt it overlooked larger systemic issues. Counselling is reported to be a helpful source of support when social support is insufficient.
- 3.3.4 Exercise, eating well, sleeping well and socializing were coping methods reported to be protective. Being organized, self-aware of and changing limiting habits and adeptly negotiating regulations to create positive healthy choices at work for themselves and their patients was reported to reduce stress and contributed to a healthy and safe work environment.
- 3.3.5 EPs identified feeling actively engaged in their work despite stressful situations. Many participants identified a lack of stress when dealing with patient trauma and experienced engagement in their work despite and sometimes because of the stress of their position.

#### POTENTIAL IMPLICATIONS

- Social support through personal and professional relationships are pillars of support for EPs.
- Lack of administrative support may have broader implications and strategies to improve and address this weakness may help to alleviate EP stress and improve overall organizational function.
- Preparatory and reactive coping strategies had a perceived impact on reducing stress.
- Protective coping strategies might become contributing factors when not held in check.
- The possible positive impact of mindfulness interventions in EP practice to reduce stress and encourage engagement was unclear.
- Engagement, self-awareness and perspective were associated with an absence of occupational stress. Self-regulation and self-awareness were perceived to reduce stress and combat the imbalance in the pressures to push beyond one's edge to cope.

#### **Summary Box 2 – Protective Resources, Protective Coping and Engagement**

### 3.4 Perceptions and Experiences of Burnout and Coping with Burnout

This section considers the ways participants described burnout, what those who had or were experiencing burnout described associated or implicated in their burnout. Further, the change they reported in strategies and how they differed from the strategies with occupational stress. Factors associated with burnout were divorce, family illness, perceived error, lawsuits and work overload. The perception and experience of factors that contributed to occupational stress seemed to differ in some ways from those reported as associated with burnout. Furthermore, the efficacy of coping strategies also changed as habitually effective strategies were reported to either be inaccessible or ineffective when coping with burnout. During perceived burnout external factors were exacerbated by a debilitation of coping strategies, prolonged compassion fatigue and impediments to EP ability to function.

#### 3.4.1 Burnout Descriptions

Participants all experienced stress from the various normalized stressors encountered at work, as described in sections 3.2 and 3.3, but these were also reportedly negotiated by participants. Almost half of the participants (n=7) said they experience 'symptoms of burnout' in their work from time to time and others said they knew colleagues who had burnt out or who they were worried about. Burnout was reported similarly by most, who said it included being unable to practice due to lack of engagement or capacity to perform their job. It was also reported that it is when many things come together that have the greatest impact on an EP's ability to cope and engage. "If I was to burnout it would be more of a cumulative effect than as opposed to a particular event. I just wanted to make that clear. That's how I see it, it would be a combination of common stressful things that are innate as opposed to an event." (Participant #1) Participants reported symptoms of burnout, but also recovery after a perceived experience of being unable to practice.

Here is one participant's reflection on burnout that touched on the overarching ideas expressed by most participants.

*I guess it comes from workplace stress or angst that results in some sort of negative consequence that may or may not result in something tangible like change, quitting or changing what kind of work you do or having negative consequence on your profession by the way you perform or the way people perceive you... I think its fundamentally that when enough things come together that a person is not 100% engaged... but I think it has to include a component of other people seeing it or a change in the way in which you're performing, a negative change. (Participant #1)*

Burnout was defined by an internal change where engagement is lost as a result of enough external challenges overwhelming a person where there are also visible external consequences. Descriptions

of burnout centred around being unable to recover from stress due to lack of energy and capacity to focus and perform their job when multiple stressors impacted them to the point that recovery was impeded. Many descriptions like this one were similar with McGrath's (1970) definition of job stress that "a (perceived) substantial imbalance between demand and response capability under conditions where failure to meet demand has important (perceived) consequences". Another participant focused on the personal experience of burnout and that it was when one cannot cope or recover.

*There's definitely times when I have found myself caring less or feeling that it doesn't matter... there's certainly days when I don't feel like going to work, but I wouldn't describe myself as burnout but when it's a repeated pattern [then I would define it as burnout]. (Participant #4)*

This focus on the individual experience rather than what might create the burnout was similar to Maslach's definition that "a syndrome of physical and emotional exhaustion involving the development of negative self-concept, negative job attitudes and loss of concern and feeling for clients" (Pines & Maslach, 1978, p. 233). McGrath (1970) focuses on the relationship between the environmental factors and the individual response rather than the focus of Maslach and Pines' (1978) which was on mental health and work outcomes rather than considering the causal mechanism. When participants did focus on individual response or behaviour in defining burnout it was to bring attention to the prolonged unmanaged stress response where recovery could not be found.

### **3.4.2 Experiences Related to Burnout**

This section will discuss reported experiences of burnout. Four situations reported to elevate and increase overall stress associated with the experience burnout were; divorce and family crisis, perceived errors, lawsuits and compassion fatigue from overwork. These were reported to contribute to an inability to negotiate and cope with demands of the position in the same way and negatively change the experience and perception of their work.

#### **Divorce or Family Crisis**

Breakdowns in personal relationships were identified as at times compromising the ability to manage work that had previously been skillfully negotiated (n=4). When participants reported experiencing burnout, personal difficulties were reported to increase the likelihood that routinely-encountered resource constraints and work overload were perceived and experienced as more stressful than otherwise (n=2). Some participants reported that when they or their colleagues have difficulties in their personal lives, such as an ill spouse, an ill child or divorce, it increased their experience of stress (n=4) and in one instance led to exiting the field (n=1). One participant described how s/he had to fire an EP who was performing poorly and behaving inappropriately due to what s/he perceived as stress associated with personal matters.

*I had to tell one [employee] to just “pack up your bags and take some time off”, right? Because s/he hated his/her work because s/he was so frustrated about coming to work... s/he'd throw charts and do stuff and you know - time for you to you know [take some] time off so I think it's individual ...oh, well s/he had lots of stuff in [his/her] life. A couple [disabled] kids and her/his [spouse] was sick, you know. (Participant #13)*

In addition to this participant, two other participants who served as department heads recalled firing EPs due to poor work performance that they attributed to the individual having to cope with extenuating circumstances. Difficulties with family in addition to work stress influenced their ability to work and function rationally, which had an impact on job performance. Burnout was attributed to both attitude or actions of the individual as well as the multiple situational factors that might account for their burnout was also disclosed.

One participant described how their relationship to their work changed and was related to feeling they were close to burnout as a result of an ongoing divorce. This was perceived as having a negative impact on the EP's workplace performance. The participant's coping strategy was to work more to avoid the stresses at home, which increased the stress and undermined competency and efficacy at work.

*Burnout... for me it was, I went through a divorce, prior to my current wife and that definitely sent me... Instead of working less I worked more. Um and not understanding that that was probably a big reason why I was getting like that, more anger issues, more frustration, more um complaints. Cause I was poorly dealing with people in terms of how I was speaking to them and so that's, that's just burnout. Is, is just getting to the point where you're no longer... you may be doing the mechanics of your job okay but the emotional side is just gone. You're basically just trying to grind yourself through a meat grinder. But I, what I find with the emerg. docs is a lot of guys will do it because that's what we're used to... So we're used to accommodating anything and everything in poor situations and we do it. (Participant #5)*

The stress of this situation may have exacerbated the normal excessive stress and the participant also reported that the decision to work more in response to the stress contributed to burnout rather than recovery. It may be that accommodating poor situations in EP work is normalized. A practice of accommodation of greater and greater compromising situations may be implicated in a cultural environment that allows the accumulation of excessive pressure. Pushing beyond the edge of their capacity was identified as systemic and cultural. The situation was also reportedly mitigated by the age of this participant who felt that being as young as s/he was, s/he was able to recover. “Looking back it's like, if I wasn't as young, as I was at the time I was in my early thirties, it would have killed me.” (Participant #5) On the other hand, it may have been that if s/he hadn't been so young s/he may not have pushed him/herself beyond capacity. Changes in professional culture and additional regulation may protect EPs from over-extending themselves beyond their capacity. The cultural practice of overcoming workload and powering through personal and individual factors may point to how some

individual characteristics may both help and hinder EP stress and having organizational support may be necessary to address individual factors implicated in burnout of EPs.

### **Perceived Errors**

One participant reported that a perceived error, that resulted in the death of a patient, led to long-term elevated levels of stress that changed their practice. As described in the protective resources section participants were comfortable with patient trauma, serious injury, and death however unexpected deaths (n=7) were described by almost half of participants as stressful. One participant explained that when he/she perceived having a preventable error that resulted in the death of the patient the stress was reported as long-term and debilitating (n=3).

*it's scaring. It's like a pit in your stomach that you can't get rid of, for me, forever. And it does diminish, but it doesn't go away... if I see a patient with a similar diagnosis I actually have a flashback... I still experience that and so personally and professionally it has made me more meticulous but also more paranoid. (Participant #6)*

This situation was one of three situations described by participants as having a lasting impact on participant work life on a daily basis. The participant reported having increased fear over three years after losing a patient they felt they ought to have prevented. A lack of perceived control has been suggested to be the strong predictor of burnout (Gundersen, 2001). In the interview quoted above, it was not the patient trauma but the perception that it could have been prevented by the physician that caused the long-term stress. As discussed in protective resources, participants did not report having a problem with patient trauma (n=5) as it was described as a part of their job. It was when the situation was perceived to have been preventable through the actions of the participant that prolonged stress was reported.

The increased long-term stress and “paranoia” reported undermined their sense of trust in their ability to address the needs of their patients. Self-perceived errors have been associated with substantial subsequent personal distress and reduced empathy that increase their odds of future self-perceived errors (West, Huschka, & Novotny, 2006). The participant reported needing greater support, and habitual coping strategies were insufficient. The actions taken to address the increased and prolonged stress will be discussed in the next section on coping with burnout.

### **Legal Risks**

Three participants described lawsuits as being stressful and one participant reported experiencing burnout as a result of the impact of a lawsuit. Lawsuits were reportedly stressful for all three participants because they were experienced as unfair, inaccurate and out of their control. One participant stated:

*It was a bogus, ridiculous case. But that was very stressful. Very stressful, you know? It was a court of people that question your ability, because you're always assumed guilty. The judge was very clear on that. It was ridiculous. (Participant #12)*

Similar to the perceived errors undermining of participant confidence in their position or ability was perceived as stressful. The perception that one is "guilty until proven innocent" rests full responsibility on the individual EP rather than being shared with the institution in which that individual operates. The liability and responsibility inherent in their professional position was reported as acceptable. That said, the perception of a lack of control over outcomes of legal difficulties added stress. Being personally accountable and responsible for patient life was reported to be manageable as described in section 3.2.1 however when participants perceived a lack of control this was reported to have a greater impact on the stress experienced.

*The things that are stressful are the things that are out of your control. I don't have any control over that. I don't have any control in court, other than just present the information. It's out of my hands. And that's stressful. (Participant #12)*

Another exacerbating aspect of lawsuits reported was the impact of a lack of support perceived. The participant described the perceived impact that lawsuits had on their work and home life:

*I really really dislike being in the situation where I'm putting out fires the whole time because I know that I will get blamed for it at some time. So that has... made me very jaded towards actually doing emergency medicine... you always have that at the back of your mind when you're working, I wonder what I'm going to get thrown under the bus for next time? (Participant #3)*

*Further to this the coping they received from work was interrupted.*

*...when I wasn't [working I wasn't] getting that enjoyment out of being in emerg.... I didn't have that sort of way to vent or to escape or to even feel good about myself. I feel good about myself when I'm in emerg... I think probably my family does suffer. I think I get irritable... when I get the burnout. (Participant #3)*

This participant returned as quickly as possible to emergency medicine after taking a leave of absence for a lawsuit and the perceived burnout that accompanied it. Physicians who are burnt out may force themselves to return to work out of fear of losing their skill as physicians, and this may put them at risk for further burnout. This is also addressed in the section on maternity leave.

*I knew that if I stayed away from emergency medicine for much longer than I actually, was, I was going to lose my nerve and wasn't going to be able to come back and do it, so I made myself come. (Participant #3)*

The stress of having your work questioned, even when one is found not guilty, inhibited participant wellbeing (n=3). Just as described in the section on perceived errors, the stress of perceived lack of control seemed to have a long-lasting impact on participants. Law suits were reported as creating continual personal and professional duress, by both older and middle aged participants. They were perceived as impeding an ability to confide in their colleagues, participate in work without fear, or experience their usual joy from work and colleagues. This also interfered with connecting with loved

ones at home. As with divorce, lawsuits occur in tandem with the same continual situational factor of overload, a job characteristic that causes continually higher level of stress and is highly correlated with burnout (Maslach et al., 2001) as well as a distancing and incapacitation of coping strategies.

### **Overwork & Compassion Fatigue**

Participants of all ages described feeling a level of stress from their jobs where they no longer cared or felt capable of caring about their patients (n=7). This was often described as occurring by the end of a shift. In section 3.2.1 the stress perceived by overwork and a lack of resources was discussed, the next quote describes the impact that overwork has on the physician and how that, in turn, impacts their patient care and their self-perception as feeling burnout of having a lack of empathy.

*Like I find I just will hit a wall where I'm just too tired to do anything and its usually after a sting of shifts... I get compassion fatigue for sure. Even just within a shift. You know from the first patient to the last patient. At the end of the shift, there's no question I just it's like I want to care about their problem and I, I do in a way but if I just want to get out of there 'cause I'm so tired I truthfully don't care as much about their situation. I don't have much empathy. (Participant #6)*

*And I tell patients that "you don't want to go into the emergency with something minor at 6 in the morning because we hate you". (Participant #12)*

*I'm going to go home and I'm going to write a letter and quit. (Participant #2)*

Many participants described experiencing stress that incapacitated them and left them feeling that they had no compassion left for patients by a certain point in their shifts. Workload was reported to induce burnout by some participants. By the end of some shifts or string of shifts, they hated their jobs, wanted to quit and were completely exhausted with no capacity for compassion. Overwork was reported to impede their ability to respond to an expected but under-resourced situation (n=7). Perceived exhaustion and a lack of ability to show patients care, attention or interest by the end of a shift or string of shifts was an experience described by a number of participants.

Participants used the concept of "compassion fatigue" to describe this experience. Compassion fatigue has been described in one study as the experience of having reduced capacity because of the emotional or physical burden of helping others in distress (Bellolio, Cabrera, Sadosty, Hess, Campbell, Lohse & Sunga, 2014). There have been actions taken to reduce the exhaustion experienced by physicians in Canada, the US, Britain, and New Zealand, particularly in reference to hours worked, as the number of hours worked in a shift have been reduced in Canada to avoid resident fatigue (Pattani, Wu, & Dhalla, 2014). There has been research on the efficacy of cutting back hours though as reduced duty hours may negatively affect the development of competency (Ibid). The cumulative impact of multiple situational factors and coping strategies that are insufficient over a period of time may contribute to burnout. The next section will discuss the participant



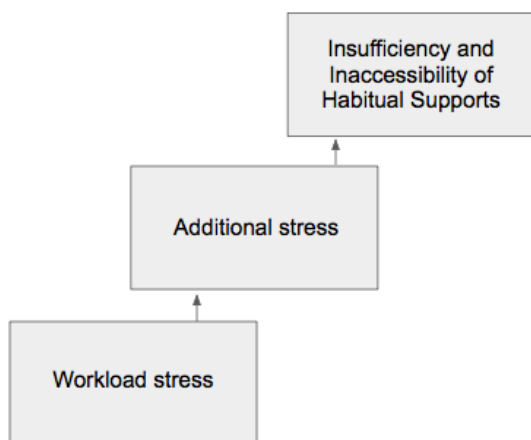
experiences of coping with burnout and how this was reportedly different from coping with occupational stress for participants.

### Experiences of Burnout Conclusion

Participant experiences of work overload, perceived errors, lawsuits, family crisis and divorce were identified as contributing to or associated with burnout. Workload was perceived by most participants as contributing to occupational stress and an overload as a result of “enough things coming together” was reported to instigate feelings of burnout.

### 3.4.3 Coping with Burnout

Coping with burnout was reportedly different in a few respects from that of coping with occupational stress. There were changes in the availability of coping strategies and a need for additional coping strategies when participants reported experiencing burnout or symptoms of burnout. While some participants reported using the same coping strategies as described in coping with occupational stress, such as spousal support (n=1), exercise (n=1) and time off to recuperate (n=4) there were differences. Participants reported that social support was not enough given the duration and extent of the stress. Further, participants described compassion fatigue as stripping them of their usual ability to respond, influencing their connection to work as well as inhibiting their ability to gain strength or use work as a stress reduction strategy (n=7). Counselling was also identified by a couple participants as a helpful coping strategy (n=2) but for others, a perceived inaccessibility of counselling (n=1) added further stress to their experience of burnout. Outside activities and exercise were reported to bring relief while at the same time putting additional stress on burnt out participants (n=3). The coping strategies that allow participants to function were in some ways disabled or insufficient making recovery more difficult.



**Figure 7. Multiple stress factors, insufficient coping and family life and supports debilitated**

When experiencing burnout, it was reportedly difficult to access previously dependable coping strategies.

*You feel so tired and so bagged by whatever you're doing that you just don't keep doing other things you normally would; whether that be social, whether that be artistic, whether that be exercise. Whatever it is that you like to do, you start to do less of it... Those are often your stress relieving techniques, right... I'm married... my friends, the rest of my family, um and again if you, if those things start to break down then you know you've got a real problem right? Because again, for the most part, for me, those are my pillars of life right, that help me function. (Participant #4)*

As discussed in the previous section divorce was associated with burnout which would also interrupt the support one gained from one's spouse. Social support from close friends, colleagues and one's spouse that EPs depend upon to alleviate stress, were also described as insufficient to address the extent of stress experienced when participants were traumatized in their work.

*I think around that certain incident that specific incident that was really helpful to have that avenue [counseling service] because of course my close friends and family and my boss, as I mentioned, were very supportive in the immediate term. I kind of couldn't keep using them as my sounding board for that long. (Participant #6)*

Experiencing higher than usual stress required more support than could be expected from their support system. One study of doctors and nurses suggested that respondents who isolated themselves from family and friends were associated with higher psychiatric morbidity and burnout (Sharma et al., 2008). This may suggest that counselling was a welcome and helpful intervention when the usual coping strategies were insufficient. When counselling was not available however this added to an already stressful situation.

*You know I sort of thought you know if I access this they're going to think that I'm depressed or whatever... So I was like, you know why would I turn to any sort of employee health? I didn't access or try to access any of those services. I was actually afraid to... if I admit that I'm stressed about it or depressed about it then you know they are going to find grounds to fire me. I didn't want it to be somehow held against me in any way, shape or form. (Participant #3)*

Stigma and fear of professional repercussions was reported to interfere with help-seeking (n=2). As discussed in the section about maternity leaves, there was a concern of taking time away from emergency because one could lose skill. This participant described withdrawing for fear of repercussions by superiors if they expressed their concerns and feared being perceived as weak and not able to cope. Pressures such as intimidation served to prevent some from seeking help. So in some instances, professional resources such as counselling was reported as relieving stress but for others, counseling was reported as not being perceived as an option. In a study at the University of Calgary, Jean Wallace looked at how the stigma of mental illness thrives in the culture of medicine and medical training and that there is a need for confidential support for physicians in need (Wallace, 2012). Perceived pressure and intimidation served to prevent some from seeking help (n=2).

Participants reported concern about being away from work but also described experiencing compassion fatigue, stripping them of their usual ability to respond making time off to recover necessary.

*I'm really surprised being [some] years out that I've already experienced those symptoms [of burnout]. So to me the symptoms of burnout are that your ability [is impaired] and just being snappy at people and lack of empathy and it's not that I don't recognize that these patients are suffering it's just that the way that I interact with them I worry sometimes that they would perceive that I, I just don't give a shit, which when it comes down to it, I don't." (Participant #2)*

Compassion fatigue was reported to, in some cases, inhibit their ability to gain strength or use work as a stress reduction strategy (n=7). As mentioned earlier in the last section on “Divorce”, working more was a reported coping strategy when faced with burnout but without the same connection and compassion, it was a double-edged coping strategy. “Instead of working less I worked more... you may be doing the mechanics of your job okay, but the emotional side is just gone.” (Participant 5) Although work was often a solace for participants when they were burnt out it only added to their stress because it was done to excess. It was suggested, by one participant when discussing exercise in section 3.3.3 on Protective Coping, that the overachieving attitudes of EPs may sometimes contribute to occupational stress rather than reducing it when coping strategies become excessive.

The next quote describes how when struggling with burnout the function of exercise changed.

*If I work out really hard or I go for a run or I go thrash some trails on my mountain bike that at least I'm exhausted, and I can sleep. So I think for me sleep is a crucial sort of thing. Um, But I can't get to sleep without absolutely just running myself into the ground because it just otherwise it's just not going to happen. So it's both effective and counter-effective. Right, it's kind of a double-edged thing. (Participant #6)*

Exercising to exhaustion was reported as required in order to sleep. The participant reported that they had to negotiate an edge to avoid excess and remain in balance. The description of the work as impossible to cope with without exercise may reflect self-awareness in tandem with a reflection of the level of stress that must be processed by the participant. This may suggest that coping strategies are on a continuum on which these participants work to maintain balance. Those things, which give them solace and recovery may also add to their stress. Another participant described how in order to cope with perceived burnout they worked outside of the emergency department.

*I can usually, by keeping myself busy, I can work through it... I did [further education, other work, and large outside projects]. So I worked. So those were my coping mechanisms, to stay really really busy and not to focus on it because I found that [when] I wasn't busy that I perseverated on it. (Participant #3)*

Overwork as a coping strategy was reported by participants who were coping with stress outside of work (n=4). As discussed in 3.2.4 Coping Contributing to Stress, extremes in exercise or work to cope was identified as stressful while also being helpful. Exercising to exhaustion was the only way this participant could get to sleep.

Despite difficulties in coping with burnout and the changes in accessibility and effectiveness of coping strategies participants continued to describe their work as fulfilling. One participant noted a love for their work was experienced even during periods when they perceived themselves as having a deep sense of burnout and anxiety.

*You know, and that's what's brought me back to emerg. is I genuinely love emerg... And when I'm happiest is when I'm in the emergency department, doing stuff and feeling like I'm helping somebody. So that, so when I wasn't getting that enjoyment out of being in emerg. And in fact when [hidden for confidentiality] I wasn't able to work and apart from the financial side of that, I didn't have that sort of way to vent or to escape or to even feel good about myself. I feel good about myself when I'm in emerg. (Participant #3)*

Bragard (2015) supported this in her review that suggested that despite difficult work conditions, including significant psychological demands, lack of resources, and poor support and moderate to high levels of burnout, EPs report high job satisfaction (Bragard et al., 2015). While EPs enjoy their work despite difficult working conditions, supportive relationships and having supportive resources is preferable while engagement was identified as optimal.

The cumulative impact of the workload stress, in tandem with divorce, lawsuits, an ill spouse and/or children or a loss of confidence in one's ability as a result of a perceived error may be exacerbated by a lack of support from previously dependable coping strategies. Burnout was identified as influencing enjoyment and reduced competency where additional stressors overloaded EPs where coping strategies became unavailable or insufficient to allow for recovery.

### **Coping with Burnout Conclusion**

Changes in an ability to cope with expected situational factors were identified as associated with an increase in stress and burnout. Strategies for coping with occupational stress were sometimes unavailable or insufficient when participants identified as burnt out. Work was also no longer available for stress reduction and exercise became excessive or added to stress, as symptoms such as an inability to sleep required greater interventions. Social support to address stress also became insufficient or inaccessible and counselling was needed for greater support. Increasing time away for recovery was supportive but it also added stress as time away from work had a perceived impact on physician competency.

### 3.4 SECTION SUMMARY

#### **THEME: Perceptions and Experiences of Burnout and Coping with Burnout**

- 3.4.1 Burnout was described as a lack of enjoyment, reduced quality of life, compassion fatigue and a lack of engagement, where the ability to function in one's profession is disabled and it is evident in one's job performance.
- 3.4.2 Participant experiences of work overload, perceived errors, lawsuits, family crisis and divorce were identified as contributing to or associated with burnout. Workload was perceived by most participants as contributing to occupational stress and an overload as a result of "enough things coming together" was reported to instigate feelings of burnout. The addition of perceived errors, lawsuits or family crisis' was also associated with burnout or symptoms of burnout.
- 3.4.3 Helpful coping strategies reported in dealing with symptoms of burnout were avoiding stresses, increasing work and school activities, increased attention to detail, increased exercise, medication, time off to recuperate, spousal support, and counselling. Changes in an ability to cope with expected situational factors were identified as associated with burnout. Strategies for coping with occupational stress were unavailable or insufficient. Work was also no longer available for stress reduction and exercise became excessive or added to stress, as symptoms such as an inability to sleep required greater interventions. Social support to address stress was not enough and counselling was needed for greater support. Increasing recovery time was supportive but also added to stress as time away from work had a perceived impact on physician competency.

#### **POTENTIAL IMPLICATIONS**

##### Implications to Academic study of Burnout

- Burnout may be a result of the cumulative effect of factors contributing to stress that exceed the already reportedly stressful and expected constraints of EP work.
- Coping strategies that are helpful and accessible during stressful times may be inaccessible and or insufficient for those who are burnt out or traumatized. Increasing coping strategies such as work, attention to detail, social support, exercise, and time off may exacerbate experience of stress and burnout.

##### Implication to Emergency Physicians in Canada

- Increased support to compensate for depletion of personal resources and incapacitation of coping strategies for EPs may help to avert burnout in emergency physicians in Canada.

#### **Summary Box 3 – Perceptions and Experiences of Burnout and Coping with Burnout**

## CHAPTER 4: STRENGTHS, LIMITATIONS & METHODOLOGICAL CONSIDERATIONS

### 4.1 Strengths of the study

- ❖ This study addressed a knowledge gap in the perceptions and experiences of emergency physicians in Canada. A diverse sample was obtained and saturation of the data was achieved.
- ❖ The study produced original data concerning the work and personal lives of emergency physicians. The depth of the data allowed the researcher to summarize a comprehensive and nuanced profile of perceptions and experiences of occupational stress, wellbeing, burnout and ways in which coping and internal and external resources impact their work life.
- ❖ Supporting and opposing previous existing research illuminated surprising results and unsurprising similarities that arose in the themes.
- ❖ The data offered hypothesis not suggested in previous studies in how burnout may arise in EPs. In-depth and personal accounts of the resource constraints, coping strategies, protective resources and experiences of engagement and burnout suggested that engagement and burnout may occur simultaneously and that required coping strategies may shift and greater support may be required.
- ❖ Emergency physicians in this study expressed ways in which their experience both contributed to stress and protected against it, sometimes in opposition to what was expected and understood from previous literature. As well as the processes in which they thrived and were completely engaged.
- ❖ This study brings nuanced perspectives to our understanding of the role of task-oriented and emotion-oriented coping in EP recovery. How grit and resilience may be both contributing to burnout and protective against it and how self-awareness and self-regulation may mitigate the impact of these coping strategies.
- ❖ The results study may help health clinicians, researchers and policies makers to guide services and future areas of research.

## 4.2 Limitations of the study

### 4.2.1 Selection Bias

There may have been a selection bias as the EPs who are willing to participate in this study might be less likely to be burnt out. EPs who were already burnt out and had left the profession were not included in the recruitment process. Practicing EPs who feel overwhelmed may have been less likely to volunteer for a Master's project. EPs who are ashamed of the coping strategies they use or their lack of adequate coping may also have been missed in this cohort. All participants were from one local region and were Canadian. This may limit the applicability of the findings to other populations, based on country of origin or area of origin. At any rate, the target population was well-balanced as mentioned in the section on participant characteristics.

### 4.2.2 General Limitations

- ❖ Short one-time interviews meant that the depth of the study was limited. At the same time, modest participation requests were likely also what made the recruitment of busy professionals possible.
- ❖ The participants were self-selected and volunteered to be interviewed. EPs who had burnt out to the point that they were no longer working were not part of the pool of EPs invited to join. It's possible that EPs close to burnout were less likely to volunteer for a project that would take more of their time and resources.
- ❖ Protection of identity through disguise of gender limited analysis somewhat.
- ❖ Situations identified as contributing to the stress of the participants may have been context specific and related to the specific emergency department in which they worked.
- ❖ All but one participant identified as not being currently burnt out however exploring factors perceived as stressful and experiences identified as 'burnout' may give some direction as to further studies that may illuminate the phenomenon of burnout. The understanding of emergency physician experience may be ameliorated by the perspectives of those who work in the profession who are not currently burnt out.

- ❖ The study looks closely at the experiences perceived as causing stress to participants or their colleagues, however as a qualitative study it is limited in scope and cannot be extrapolated, but endeavors to indicate areas that may warrant further study.

### 4.3 Methodological Considerations

Concerning the interviews themselves, detailed accounts were shared by participating EPs. The participants were comfortable and at ease with discussing their experiences and some reported feeling comfortable with the topics and one expressed surprise at the depth of the answers they were able to give. The phone interviews at first seemed a little more challenging. Because we were not in the same room, I found that I was unable to elicit as much or have a sense of a flow and I sometimes found uncomfortable silences where I felt I did not guide the interview as adeptly as the in-person interviews. I was concerned there might have been less space for the physician to reflect and I was less capable of giving or receiving cues or uncovering more questions to elicit longer answers from the participants. Although the telephone interviews were shorter when I studied the data I found that this did not limit the contributions, which were astute and insightful.

In terms of challenges in the field, gaining ethical approval in Canada was tougher than anticipated. Approval for the project took five months and was not achieved until the last few weeks of fieldwork. Administrative challenges were overcome and completed to ensure that my Canadian and Norwegian supervisors were all satisfied that the parameters required by their universities were being upheld and respected.

Once the revised project was approved, interviews took place and transcription of the interviews were completed immediately before leaving Canada to comply with Canadian requirements. It was not possible to send transcripts to my Norwegian supervisors because of a UBC requirement not to email transcripts to protect participants' confidentiality. This led to a distancing between myself, the researcher and my Norwegian supervisor, which impeded their direction in the field and seemed to impede close collaboration on my return.

At the beginning of the analysis stage, my admiration for the physicians may have created a bias that impacted my willingness to scrutinize and analyze the data critically. The inability to analyze the data may also have been simply a lack of understanding of how to analyze data at that point. Eventually having a myriad of different approaches from each of my advisors helped to demonstrate how one



can approach analysis in many ways and they each suggested ways to minimize bias. As Derrida suggests, deconstruction recognizes the truth on both sides of a norm rather than rejecting one side or the other (Derrida, 1982). In understanding and giving value to both my own view and that of each of my advisors I gained clarity on the overarching shared perspectives. This deepened my analysis and my understanding of the process.

## CHAPTER 5: CONCLUSIONS & IMPLICATIONS

### 5.1 Conclusions

In this qualitative study of the experience and perceptions of occupational stress and burnout by emergency physicians in Canada participants reported negotiating occupational stress with the help of multiple resources, coping and engagement. Burnout was described as influenced by a culmination of continual workplace constraints paired with extreme or unusual prolonged stresses and the debilitation of habitual coping strategies. Perceived symptoms of burnout resulted in changes in coping strategies and adding further supportive resources to cope and aid in recovery.

Resource constraints were identified by participants as contributing to their experience of stress. Challenges with support staff, other doctors and a limited working relationship with hospital administration were identified as affecting their work, personal relationships, and stress levels. The lack of administrative aid and protection put an additional burden of responsibility upon EPs.

Some coping strategies were reported as contributing to the stress experienced at work. The normalized sacrifice of self-care, a lack of breaks, a lack of sleep, shift work and isolation were identified as contributing to stress. EPs identified using coping strategies to function in the short term, despite possible consequences to themselves. Stigma associated with weakness and concern of the perception of weakness by seeking help may add another layer of stress to the situational factors of workload and extra stressors contributing to stress. EPs identified coping strategies identified in the literature as possibly contributing to stress or burnout but which they reported as effective and helpful. Coping styles were reported to be effective and necessary although they were sometimes also seen as negative or inappropriate.

Time off, self-care outside of work, and being organized were helpful ways of negotiating the heavy work load. At the next level having the confidence of an experienced EP and negotiating the parameters of policy to ensure patient care by forcing administration to cut corners instead of themselves was a helpful negotiation of workload stress that demonstrated the intensity of the workload and the strenuous negotiations required to cope with the work of an EP.

Participants reported creating and utilizing available resources to overcome challenges, whether through efficiency, self-care, or negotiating stress and high-level workloads. Protective resources also centered around social support through personal and professional relationships. Strong support systems in EP work life was reportedly essential as a protective strategy against workplace stressors

and long-term sustainability in the profession. The lack of this support may have a debilitating impact. There was a repeated report of limited administrative support, which may have broader implications as this means that when the social supports or other personal or professional difficulties occur the college of physicians, administration and sometimes counselling were identified as not a supportive resource that they could reach out to.

Although some participants appreciated mindful practices in their lives there were conflicting perspectives on mindfulness. It was suggested that as a practice may be challenging to implement and may not address the immediate pressing challenges they face. Most participants identified engagement in their work despite, and sometimes because of, the stress of their position. Self-awareness and self-regulation were identified protective coping strategies that may aid in keeping their coping strategies in balance. Perspective on responsibility and self-regulation may aid in reigning in EP ability to push past their edge as a result of their identified propensity for high grit and resiliency.

Burnout was described as a lack of connection, ability, and enjoyment in one's work, where a lack of engagement and ability to function in one's profession is disabled and it is evident in one's job performance. Participant experiences of burnout centered around experiences of family crisis and divorce, perceived errors, lawsuits, excessive workload and compassion fatigue. These experiences were identified as creating excessive stress in certain circumstances and as possible contributors to perceived experiences of burnout. The cumulative impact of their workload with these additional stressors, insufficient or debilitating coping strategies and perceived inaccessibility to interventions may be implicated in perceived burnout.

EPs may at some point experience illness, inexperience, an incapacitating workload, divorce, patient death from a perceived error or have an ill child or spouse. It is in our interest to protect and shield them from burnout and exiting the field as a result of the experiences that may incapacitate some of them for a period of time. The findings suggest that they cope and recover however there are times when some EPs may need additional support to carry them through difficulties. The amelioration of structural support through a collaboration between organizational structures and individual EPs may aid in creating a sustainable career path for all EPs.

## 5.2 Implications of the Study

### 5.2.1 Implications of the Perceptions and Experiences of Occupational Stress

Workload stress was negotiable for most participants despite perceived stress experienced.

Impediments to structural support as a result of constraining policy and administrative impotence may inhibit creating straightforward solutions for stressful situations. Professional structural impediments and professional culture may also encourage a reluctance toward stress management and training for ancillary skills, another possible contributing factor in addressing occupational stress.

Whether task-oriented or emotion-oriented, coping strategies fulfill the function of negotiating challenging situations and both may be implicated in occupational stress. Mitigating factors may be involved in when task-oriented or emotion-oriented coping reduce stress. Task-oriented coping strategies, such cutting corners were perceived as stressful in the short term but which were perceived as functional, necessary Emotion-oriented coping, emotional outbursts were seen as relieving stress and comforting participants.

Furthermore, EPs negotiate less than optimal coping strategies and administrative policies that may contribute to increased stress and negotiate around reported difficulties these create. Self-awareness, perspective on their responsibility and of the edge upon which they work reportedly aids in avoiding overstepping their capacity. On the other hand, for some, perceived stigma and inaccessibility of help-seeking was reported to add stress in addition to workload stress and other stressors that may be implicated in higher risk of burnout for EPs. While self-awareness, perspective and negotiating their position aided in reducing stress, cultural and professional norms that encourage self-containment may be implicated in burnout.

### 5.2.2 Implications from the Perception of Protective Resources and Coping

Social support from fellow EPs was identified as a dominant source of support. Individual coping strategies such as time off, exercise, a good sleep and proper nourishment were identified as protective preparatory strategies. Coping strategies at work that were protective were being highly organized, and being engaged and prepared to negotiate policy. All coping strategies had a perceived impact in reducing stress. However, even the best protective coping strategies may become contributing factors when not held in check if stress being experienced is too great. When social support and habitual coping strategies are unavailable or unbalanced having strong structural

support available may reduce the risk of burnout. Therefore, the lack of administrative support may have broader implications when EPs are overtaxed and their coping strategies are inaccessible. Strategies to improve and address this weakness may help to alleviate EP stress and improve overall organizational function, and further, may aid in reducing burnout in this at-risk population.

Although an interest in mindfulness to reduce stress was unclear engagement was a valued attribute and self-awareness was identified as particularly helpful. Self-awareness may explain the difference between those who burnout and those who do not as having high grit and resiliency in EPs may encourage those without perspective or self-regulation to overstretch themselves. Self-awareness, self-regulation or perspective were associated with an absence of occupational stress in some participants while high grit and resiliency were sometimes associated with more stress in participant narratives. The marriage of high grit and self-regulation described by experienced participants may allow them to negotiate and overcome the parameters while simultaneously protecting their health and wellbeing. Engagement was also reported to be present at the same time as stress was experienced, which may suggest there is not an antithetical relationship.

### **5.2.3 Implications from the Perceptions of Burnout and Coping with Burnout**

In terms of the implications to the academic study that arose in the data, burnout may be a result of the cumulative effect of factors contributing to stress that exceeds the already reportedly stressful and expected constraints of EP work. Further, strong coping strategies that are helpful and accessible during stressful times may be inaccessible and insufficient for those who are burnt out or traumatized. Increasing intensity of habitual coping strategies such as; work, attention to detail, social support, exercise, and time off, may exacerbate the experience of stress and burnout. Furthermore, increased support to compensate for depletion of personal resources and incapacitation of coping strategies for EPs may be necessary to address burnout.

# CHAPTER 6: RECOMMENDATIONS & SUGGESTIONS FOR FUTURE RESEARCH

## 6.1 Recommendations

Providing recommendations for reducing occupational stress and burnout and improving the work lives of emergency physicians falls out of the scope of this study. It should be clear from the study findings that this is a daunting task and a multi-sectoral approach may be needed. However, emergency physicians should participate in these discussions.

Given that occupational stress and burnout are risks in emergency medicine, workshopping EP-led strategic changes that alleviate the risk of occupational stress and burnout may include the following as a starting point:

1. **Encourage Self-Regulation.** Based on the findings from this study that suggest that high grit and resilience may be implicated in the willingness to push beyond one's capacity while self-regulation may be a protective factor tempering high grit and ability to overcome challenges in EPs when it might endanger their health.
2. **Increase Supportive resources.** To compensate for a depletion of personal resources and incapacitation of coping strategies and supports for EPs who may be on the edge of experiencing burnout.
3. **Anonymous Counselling Services.** List services for physicians that are completely anonymous so that any fear of repercussions to their professional standing are uncompromised. Increased access to confidential and anonymous professional supports may help to alleviate the disproportionate pressure created by relationship breakdown and professional distress and avoid any fear of stigma related to the need for extra support in difficult times.
4. **Post Leave of Absence Support.** Develop support systems for parents returning from maternity leaves, or any other long leave of absence.
5. **Creating an Interactive web space** for EPs to communicate and share their personal solutions to workload and resource constraints may aid in overcoming system challenges through a greater understanding of the solutions that have been successful. There were exceptional personal changes described by participants that allowed them to overcome system constraints to ensure they could do their work despite systemic parameters impeding best practice. And interactive web-space for EPs might also create a space for young department heads in rural areas to partner with more experienced EPs in mentorships.

6. Training for EP trainees and students in administrative skills, negotiating skills for interacting with administration and self-regulation to combat overstepping their capacity.

## 6.2 Suggestions for Future Research

This study exposed issues that might be the focus for future research. Some research areas might be:

1. Further research is warranted on the relationship between self-regulation and burnout, particularly whether there is a mitigating relationship between resilience and self-regulation influencing one's risk of burnout.
2. Future research is needed on how to implement organizational collaborative change that may aid in navigating any limitations or weaknesses in individual situations or institutional structures that impact EP health and wellbeing.
3. Further research on solutions to address ways of supporting EPs further when multiple stressors impede best practice.
4. Further research on possible repercussions of extensive restrictions to self-care on EP stress level, health and wellbeing and possible solutions to address habitual efficiencies that elevate EP stress and may increase the risk of burnout.
5. Future research on the impediments to support for EPs from administrative bodies in hospitals.

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# Appendix A: Coding Graph

MAJOR THEMES	SUB-THEMES	CODE	Notes on Code	(n=#)	# mentions
<b>1. DESCRIPTIONS &amp; EXPERIENCES OF OCCUPATIONAL STRESS</b>	<b>1. resources constraints</b>	workload	workload - patient volume everyday/multiple tasks	11	20
		lack of resources	Lack of resources: beds, specialists, space (Dangerous)	2	6
		lack of training	Lack of Training no admin (stress from admin work #15)	3	5
		lack of training	Lack of Training (no stress management)	3	5
		lack of training	Lack of Training (1yr residency from SVI) no mentors, (older ER's retire or leave too soon #15)	3	5
		lack of training	Lack of resources for returning from leaves, hard to ask for help, Renner, pregnancy constraints	4	7
		gender	lack of respect, trying to be a female, needs of difference, fear of difference	4	7
		gender	lack of respect, trying to be a female, needs of difference, fear of difference	4	7
		gender	lack of respect, trying to be a female, needs of difference, fear of difference	4	7
		gender	lack of respect, trying to be a female, needs of difference, fear of difference	4	7
		gender	lack of respect, trying to be a female, needs of difference, fear of difference	4	7
<b>2. POLICY/PROF. CONSTRAINTS</b>	<b>3. challenging relationships</b>	burden of responsibility	independent contractors so no support available (& no staff room)	9	15
		failure of regulations	Failure of Regulations (FFS) (wait times are what's available)	9	15
		independent contractors	independent contractors so no support available (& no staff room)	9	15
		burden of responsibility	pressure and on edge of excessive strain from burden of responsibility	10	14
		others not doing their job	Nurses, clerks or Specialists don't return calls or respond as regulated, fail to do their job	10	14
		lack of respect	Lack of Respect from Specialists, 1,3,5, (6,9 nurses & patients) or dept heads, students	10	14
		non-urgent patients	non-urgent patients	10	14
		unexpected dying patient	perceptions & decisions surrounding dying patient: ie. Feel they are too young & pressure of responsibility for life	10	14
		external extra stressors - home difficulties, no break, urination	problems at home, outstanding complaints, law suits, getting audited (milder versions of divorce and lawsuits)	3	4
		sex, drugs, alcohol, suicide	Not taking breaks to regroup, rehydrate & urinate	7	9
		isolation	casual sex, drugs, alcohol, suicide	7	9
objectivity patient	isolation, bottling up stress, reduce connection with family, brooding	8	10		
cutting corners	objectivity patient, reduce compassion & connection, sarcasm	8	10		
work to alleviate stress at expense of balance	cutting corners (sometimes identified as necessary sometimes as a signal of burnout)	8	10		
excess exercise	Excessive Work (at expense of balance and time with family #15)	8	10		
disorganized unprepared	Excessive Exercise	8	10		
low stress, negotiate, accept or indifferent to resource limited	Being disorganized & unprepared	2	2		
lack of control & self awareness	Acceptance of limits, love of stress, negotiating around around policy	2	2		
<b>2. PROTECTIVE RESOURCES</b>	<b>1. social support</b>	nurses & ancillary staff	nurses & ancillary staff provided professional support	6	16
		Personal Relationships	Personal Relationships (Spousal and closest friends predominantly)	9	16
		Fellow Doctors	Fellow Doctors (group or single) (having a team to collaborate with)	15	35
		patient interaction	patient interaction	5	5
		debriefing, hospital wellness program, hosp psychiatrists	debriefing, hospital wellness program, hosp psychiatrists	3	3
		counseling, useful	counseling, useful when other supports perceived as insufficient	3	3
		College of Phys., Docs of BC (BCMA), crisis Programs	College of Phys., Docs of BC (BCMA), Crisis Programs	2	2
		staircase study outside aid (#15), Mindfulness #6	Interventions wanted - staircase study outside aid had good results (#15), Mindfulness useful #6	2	2
		sleep exercise, good food	Sleep Exercise, Good food	4	7
		health poor wellbeing strong	Separating personal life from work to enjoy life and regroup (trying to not take it home)	9	9
		separation of personal and professional life	Organizing & prepared, one thing at a time, no multitasking (2 called it "OCOP"), attentive (not mindful)	11	17
organized	Reducing Work hours, (High Income #1, 11), schedule flexibility	11	17		
reduce work hours	doing other work positions or social activities to create balance and reduce stress	4	5		
empathetic to patient	empathizing with patient	5	5		
mindfulness useful	mindfulness useful	9	14		
mindfulness not useful	mindfulness not useful (it would be useful to some and not others)	8	9		
engagement	engagement, no & positive attitude, personality, (I don't consider my job stressful 13)	9	9		
perspective on responsibility	responsibility in perspective, knowing you did your job	5	10		
love work, sense of wellbeing	importance/elder of good health, wellbeing & love of work, like that work is over when its over	10	10		
self aware	Self aware, take a minute to regroup / behaviour changes, cry and release express sadness for death	8	13		
<b>3. DESCRIPTIONS &amp; EXPERIENCES OF BURNOUT</b>	<b>1. burnout description</b>	reduced quality of life, compassion fatigue	no enjoyment, reduced quality of life, compassion fatigue and a lack of engagement, going through the motions	7	11
		systemic issues with emergency medicine	systemic issues with emergency medicine	7	11
		enough things come together	enough things come together	4	7
		extreme event	extreme event	4	7
		noticeable impact on ability to do work	has an impact on ability to do work and is noticeable to others	4	5
		unable to sleep without exercise	unable to sleep without exercise	1	1
		divorce & family crisis	divorce & family crisis	4	4
		lawsuits	lawsuits	3	3
		perceived errors	perceived errors	3	3
		work overload - short term burnout, recovery w/time off	work overload - too much to do and too many shifts (short term burnout, recovery possible with time off)	7	11
		<b>2. experience of burnout</b>	<b>3. coping unavailable</b>	work no longer avail, for stress reduction, compassion fatigue	work no longer acceptable for stress reduction, compassion fatigue
coping strategies no longer available for stress reduction	relationships (left, socializing or exercise) no longer available for stress reduction			5	13
counseling no longer available for stress reduction	relationships (left, socializing or exercise) no longer available for stress reduction			5	13
others and control other expertise or hard work are superfluous	others and control other expertise or hard work are superfluous			3	3
increased school (at home or road)	increased school (at home or road)			3	3
avoidance - increasing work and school activities	increased work and school activities			3	3
Spousal Support	Spousal Support			1	1
increased exercise	increased exercise			1	1
time off to recuperate from burnout	time off to recuperate from burnout			4	4
counseling aided in reducing symptoms of burnout (flashbacks) increased attention to detail, paranoia	counseling aided in reducing symptoms of burnout (flashbacks) increased attention to detail, paranoia			2	2

## Appendix B: Consent form

### STUDY INFORMATION

**TITLE: ‘Occupational Stress and Burnout in Emergency Medicine:  
A Qualitative Study among Canadian Emergency Physicians’**

#### **I. STUDY TEAM:**

##### **Responsible Investigator:**

David Barbic, MD, FRCPC  
Department of Emergency Medicine | Faculty of Medicine  
The University of British Columbia | SPH  
Clinical Assistant Professor  
604-349-5272 | [David.barbic@ubc.ca](mailto:David.barbic@ubc.ca)

##### **Co-Investigators**

Riyad B. Abu-Laban MD, MHSc, DABEM, FRCPC  
Associate Professor and Research Director  
Department of Emergency Medicine | Faculty of Medicine  
The University of British Columbia | VGH Campus  
3300 – 910 W 10th Avenue | Vancouver, BC Canada V5Z 4E3  
604.875.4111 x62181 / [abulaban@mail.ubc.ca](mailto:abulaban@mail.ubc.ca)

Skye Barbic, PhD., Assistant Professor  
Faculty of Medicine | Department of Occupational Science and Occupational Therapy  
The University of British Columbia  
2255 Westbrook Mall | Vancouver, BC, Canada V6T 2A1  
778-846-6134 | Fax: 604 822 7756 | [skye.barbic@ubc.ca](mailto:skye.barbic@ubc.ca)

Christina Brux Mburu MPhil, Ph.D. Candidate  
Faculty of Medicine | Department of Community Medicine  
The University of Oslo  
Postboks 1130 Blindern | 0318 Oslo, Norway  
[+47 968 79 017](mailto:c.b.mburu@medisin.uio.no) | [c.b.mburu@medisin.uio.no](mailto:c.b.mburu@medisin.uio.no)

Per Kristian Hilden, PhD. Assistant Professor  
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##### **Student:**

Helena Fleming, Master’s Student - International Community Health  
Faculty of Medicine | Department of Community Medicine  
The University of Oslo, Postboks 1130 Blindern | 0318 Oslo, Norway  
778-251-2526 | [h.k.fleming@studmed.uio.no](mailto:h.k.fleming@studmed.uio.no)

#### **II. INTRODUCTION:**

### **Background and purpose**

This is an invitation for you to participate in a University of British Columbia and University of Oslo research study that intends to produce knowledge about occupational stress among emergency physicians. Research indicates that emergency physicians face high levels of occupational stress and burnout, and this project is thus motivated by the need for a greater wealth of knowledge about experiences and perceptions of stress and burnout, from the perspectives of emergency physicians themselves.

This research is taking place in connection with the International Community Health Master Program at the University of Oslo's Faculty of Medicine, Department of Community Medicine and in collaboration with The Faculty of Medicine at the University of British Columbia. The study is funded, in part, by the Borregaard Research Fund. The study has been reported to the University of British Columbia's Ethics Review Board and to the Data Protection Official for Research at the Norwegian Social Science Data Services.

You have been asked to participate in this study based on your profession in emergency medicine and because you currently reside in Canada. Participation in this project is voluntary.

### **III. PURPOSE AND INVITATION:**

**What is the purpose of this study?** The primary purpose of this project is to identify how emergency physicians define occupational health and well-being and explore their experiences of occupational stress and burnout. The secondary aim of this project is to identify coping strategies that emergency physicians use to manage stress in their work and personal lives

**Why should you take part in this study?** We have invited you to be a part of this study because your experiences are relevant and informative to our study. The researchers are from University of British Columbia and the University of Oslo. The researchers are interviewing individuals who practice emergency medicine in Canada.

### **IV. STUDY PROCEDURES:**

#### **What does the study entail?**

Should you agree to participate, you will be invited to meet with a member of the research team to participate in **one** interview about your experiences of occupational stress and/or burnout, your perceptions of its consequences, and your strategies for managing or preventing it. The time that you will be asked to contribute for these research activities will be 45 minutes. With your permission, the interview will be recorded and transcribed. If you prefer to participate without audio recording, this request will be respected. The researcher will accommodate your availability and preferences with regard to the timing and location of the interviews.

Your participation is voluntary. You do not have to answer any questions that you do not want to. None of your responses will be shared with your employer, and participating or declining participation in the study will not have any impact on your employment. You may end your participation at any time.

### **V. STUDY RESULTS**

The main results of this study will be published in academic journal articles. They will also be

reported in a graduate thesis project for Ms. Helena Fleming at the University of Oslo. The results that will be published will not include any personal identifiers.

## **VI. HOW DO I KNOW IF I AM ELIGIBLE FOR THIS STUDY?**

To participate in this study, you must be an actively practicing emergency physician in Canada.

## **VII. POTENTIAL RISKS OF THIS STUDY:**

We do not think there is anything in this study that could harm you. Some of the questions we ask might upset you. Some of the questions we ask may seem sensitive or personal. You do not have to answer any question if you do not want to. A list of resources will be provided for addressing any stress that may arise from topics discussed in the interview.

## **VIII. POTENTIAL BENEFITS OF THIS STUDY:**

Although there are no direct benefits of this study to you, you may enjoy participating in the interview. You might also appreciate contributing to the process of producing knowledge about occupational stress and potential methods for reducing stress, preventing burnout, and promoting occupational health and wellbeing in emergency medicine.

## **IX. INTERVIEW SAMPLE QUESTIONS**

The following are some examples of the kinds of questions that may be asked in the interview:

- Can you describe what occupational health and well-being, in other words, health and well-being as associated with one's professional life, means to you? How important is it and why? How would you describe your own occupational health and well-being?
- And, vice versa, what does occupational stress and burnout mean to you? Can you tell me about your own experiences of stress and/or burnout in your professional life?
- Can you tell me about an event you have experienced in your professional life that caused you stress?
- How do you react and respond to occupational stress? Is there anything that helps you to manage or relieve this stress? Is there anything that makes it worse?

## **X. CONFIDENTIALITY:**

### **How will your identity be protected?**

Your confidentiality will be respected. Information that discloses your identity will not be released without your consent unless required by law. All documents will be identified only by code number and kept in a locked filing cabinet. Participants will not be identified by name in any reports of the completed study. Data will be stored on an encrypted file stored in a locked room in the Department of Emergency Medicine at St. Paul's Hospital. Data that has been transcribed will be securely stored on the UBC Department of Emergency Medicine's password-protected server in a file with access limited to the Principal Investigator, Co-Investigators, and student named to this project (Ms. Helena Fleming). In addition, neither your name nor any other personal identifiers will be used in any reports or publications arising from this study. All non-anonymous data materials will be deleted upon project completion in December 2016.

## **XI: COMPENSATION:**

### **Will I be paid to participate in this study?**

You will receive a \$50.00 gift card [from one of four retailers: Starbucks, Indigo, iTunes, Amazon] in

return for participating in this study. Your participation in this study is voluntary. You may choose to withdraw from the study at any time. If your participation ends early for whatever reason, you will still be compensated.

**XII. CONTACT FOR INFORMATION ABOUT THIS STUDY:**

If you have any questions or concerns about what we are asking of you, please contact the study leader or one of the study staff. The names and telephone numbers are listed at the top of the first page of this form.

**XIII. CONTACT FOR COMPLAINTS**

**Who can you contact if you have complaints or concerns about the study?**

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca) or call toll free 1-877-822-8598.

**XIV. PARTICIPANT CONSENT AND SIGNATURE PAGE**

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative impact on your employment. If you decide to withdraw, all your personal data will be made anonymous.

**XIV. PARTICIPANT CONSENT FORM**

My signature on this consent form means:

- I have read and understood the information in this consent form.
- I have been able to ask questions and have had satisfactory responses to my questions.
- I understand that my participation in this study is voluntary.
- I understand that I am completely free to refuse to participate or to withdraw from this study at any time, and that this will not have any consequences.
- I understand that I am not waiving any of my legal rights as a result of signing this consent form.
- I will receive a signed copy of this consent form for my own records.
- I consent to participate in this study.

---

 Participant Signature

Printed name

Date

---

 Signature of person obtaining consent

Printed Name

Study role

Date



## Appendix C: Interview Guide

### INTERVIEW GUIDE

This qualitative study aims to gain an understanding of emergency physicians' experiences of occupational stress and burnout, perceptions of its consequences, and strategies for managing it. This thematic interview guide will be used to flexibly direct the in-depth interviews in accordance with this study aim. This guide hence outlines some thematically grouped, open-ended questions. Participants will be encouraged to express themselves freely and the interviews may diverge from this guide in accordance with individual participants and the evolving project themes. The precise language used may differ from that which is written here.

Throughout the interview, a number of probes will be used to encourage in-depth exploration of the matters discussed. Examples of these probes are as follows:

*That's really interesting. Can you please tell me more?*

*What was this like for you? How did this make you feel?*

*So, I think that I have heard you say \_\_\_\_\_. Did I understand you correctly?*

*I'd really like to hear more about that. Could you give me some examples?*

Prior to beginning the interview and asking any questions, the following script will be read:

*Thank you for choosing to participate in this interview. Prior to beginning, I want to remind you that your participation is voluntary. You can choose to discontinue your participation and end this interview at any time and without any consequences. Within this interview, please feel free to decline to answer any questions that you are uncomfortable with or that you for any reason do not wish to answer. You do not need to provide any reason for doing so. If you permit, I would like to audio record this interview. Is this ok with you? Do you have any questions about this or anything else?*

### **Understandings and Experiences of Occupational Health/Wellbeing, Stress and Burnout**

- ❖ Can you describe what occupational health and well-being, in other words, health and well-being as associated with one's professional life, means to you?
- ❖ How important is it? Why?
- ❖ How would you describe your own occupational health and well-being?
- ❖ Vice versa, can you describe what occupational stress and burnout mean to you?
- ❖ Do you currently or have you previously experienced occupational stress and/or burnout?
- ❖ Can you please tell me about your own experiences of stress and/or burnout in your professional life – perhaps a particular event or situation that you recall?
- ❖ Are there additional stressful events or situations that you recall as well? Can you tell me about one or more of these?

### **The Perceived Consequences of Occupational Stress and Burnout**

- ❖ What might some of the consequences of occupational stress and burnout be?
- ❖ Does stress at work affect your \_\_\_\_\_ (professional satisfaction and enjoyment, perceived professional performance and quality of patient care, mental health and well-being, and/or personal life)? If so, can you tell me about this?
- ❖ Were there any consequences associated with the event(s)/situation(s) that you told me about before? If so, can you tell me about these?
- ❖ Do you think that occupational stress and burnout affect the emergency medicine profession at large? If so, how?

### **Coping with Occupational Stress**

- ❖ How do you react and respond to occupational stress? Is there anything that helps you to manage or

relieve this stress? Is there anything that makes it worse?

- ❖ Do you use, for example, \_\_\_\_\_ (meditation or mindfulness activities, exercise, alcohol, tobacco or other substances, socializing, or anything else?)
- ❖ What do you find to be effective or ineffective methods of stress management/what do you feel does or does not work well?
- ❖ Which of these coping methods do you view as positive and healthy, or, vice versa, negative or unhealthy? How does your experience differ when you use what you perceive as negative/unhealthy versus positive/healthy coping strategies? Are there differences in when you choose one form of stress response or management over the other?
- ❖ Can you tell me about a stressful event or situation that you feel you managed well? How did you successfully cope with the stress of this situation?
- ❖ Can you tell me about a stressful event or situation that you felt you couldn't cope with or that you wish you could have dealt with better? If you could go back, what would you do differently?
- ❖ Do you think that certain kinds of workplace support or interventions might be useful in promoting occupational health and reducing occupational stress and burnout in your profession? Do you have any personal experience with any? If so, can you tell me about this?

#### **Concluding Question**

Is there anything that I have not asked about that you think is important, or anything that we have not talked about that you would like to share with me prior to concluding our interview?

## Appendix D: Demographics Questionnaire

**TITLE: Occupational Stress and Burnout in Emergency Medicine:  
A Qualitative Study among Canadian Emergency Physicians**  
Principal Investigator: Dr. David Barbic, MD, FRCPC

### Demographics

Age (years): \_\_\_\_\_

Sex:

- Male
- Female

How long have you practiced emergency medicine? \_\_\_\_\_

Are you married or live in a common-law relationship?

- Yes
- No

Do you have children?

- Yes
- No

Do you engage in academic activities outside of emergency medicine clinical practice?

- Yes
- No

How would rate your quality of life?

- Excellent
- Very Good
- Good
- Fair
- Poor

## Appendix E: Recruitment Letter

**TITLE: Occupational Stress and Burnout in the Emergency Medicine Profession:  
A Qualitative Study among Canadian Emergency Physicians**

Principal Investigator: Dr. David Barbic, MD, FCRP

Dear Colleagues,

I am an emergency physician at St. Paul's Hospital in Vancouver BC. I am supervising Helena Fleming, a Master's level student at the University of Oslo. We are writing to introduce her research project and to hereby invite you to participate. We would be pleased and grateful to include you as a participant.

The project is inspired by the need to understand high rates of stress and burnout in the emergency medicine profession. In this project, Ms. Fleming will interview emergency physicians in our community to understand their experiences of occupational stress and burnout, the perceived consequences, and ways in which emergency physicians cope with stress. This study will contribute to an increased understanding of the types of stress that emergency physicians face and how they cope on a daily basis. The study will take place in Vancouver, from October-December 2015.

For this project, we hope to recruit 10 emergency physicians. Your research participation will entail taking part in a 45-minute interview and a possible follow-up interview to ensure data quality. We would be very grateful for any assistance that you might be able to offer with regard to participant recruitment. If you are interested learning more about this project, you are welcome to contact myself or Ms. Fleming directly. Your time and assistance is greatly appreciated.

With gratitude,

Helena Fleming  
778-251-2625  
[Helena.fleming@gmail.com](mailto:Helena.fleming@gmail.com)

Dr. David Barbic  
604-349-5272  
[david.barbic@ubc.ca](mailto:david.barbic@ubc.ca)

## Appendix F: Funding Documents

Your application regarding the project 'The Potential Value of Mindfulness Meditation for Addressing Stress and Burnout in Emergency Medicine', was considered by the Board of the Forskningsfond today.

The Board have the pleasure of informing you that a sum of

NOK 10 000,-

was granted, provided the project is completed.

The Board requests a report covering the work linked to the grant, to be sent to the Forskningsfond within April 30<sup>th</sup> 2016. Furthermore, it is required that Borregaard Forskningsfond is mentioned as contributor in reports/publications regarding the subject.

Please send a bill for the amount to Borregaard Forskningsfond v/Helge Bjørneby, boks 162, 1701 Sarpsborg.

Best regards  
for Borregaard Forskningsfond  
Helge Bjørneby  
Daglig leder

## Appendix G: Norwegian Ethical Approval Documents



Norsk samfunnsvitenskapelig datatjeneste AS

NORWEGIAN SOCIAL SCIENCE DATA SERVICES

Christina Brux Mburu Institutt for helse og samfunn Universitetet i Oslo  
Postboks 1130 Blindern 0318 OSLO

Vår dato: 19.06.2015 Vår ref: 43519 / 3 / HIT Deres dato: Deres ref:

### TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 20.05.2015.  
All nødvendig informasjon om prosjektet forelå i sin helhet 18.06.2015.

Meldingen gjelder prosjektet:

43519

*Behandlingsansvarlig Daglig ansvarlig Student*

*The Potential Value of Mindfulness Meditation for Addressing Stress and Burnout in*

*Emergency Medicine: A Qualitative Intervention-Based Study of Emergency Physicians' Experiences with 'The Work of Byron Katie'*

*Universitetet i Oslo, ved institusjonens øverste leder*

*Christina Brux Mburu*

*Helena Fleming*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema,

<http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis

melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 01.06.2016, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Katrine Utaaker Segadal

Hildur Thorarensen

*Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.*

*Avdelingskontorer / District Offices:*

*OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. [nsd@uio.no](mailto:nsd@uio.no)*

*TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. [kyrre.svarva@svt.ntnu.no](mailto:kyrre.svarva@svt.ntnu.no)*

*TROMSØ: NSD, SVF, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. [nsdmaa@sv.uit.no](mailto:nsdmaa@sv.uit.no)*

Kontaktperson: Hildur Thorarensen tlf: 55 58 26 54 Vedlegg:

Prosjektvurdering Kopi: Helena Fleming [h.k.fleming@studmed.uio.no](mailto:h.k.fleming@studmed.uio.no)



## Personvernombudet for forskning

### Prosjektvurdering - Kommentar

Motivated by the need to respond to high rates of burnout and stress in emergency medicine, this project will initiate a mindfulness meditation intervention – specifically, “The Work of Byron Katie” – among a group of emergency physicians in Vancouver, Canada. Qualitative research will be conducted throughout, with the objective of exploring the participating physicians’ experiences of occupational stress and burnout, the perceived consequences of such, their experiences while participating in the mindfulness meditation intervention, and their perceptions of its potential impact on their professional satisfaction, professional performance, occupational stress, personal lives, and health and well-being.

REC has stated that the study falls outside the remit of The Act, and is exempt from review in Norway, and that the project can be implemented without the approval by the Regional Committee for Medical Research Ethics (ref 2015/832 C).

The sample will receive written and oral information about the project, and give their consent to participate. The letter of information is well formulated, but the supervisor's name should be added.

There will be registered sensitive information relating to health.

The Data Protection Official presupposes that the researcher follows internal routines of Universitetet i Oslo regarding data security. If personal data is to be stored on a private computer, the information should be adequately encrypted.

Estimated end date of the project is 01.06.2016. According to the notification form all collected data will be made anonymous by this date. Making the data anonymous entails processing it in such a way that no individuals can be

recognised. This is done by: - deleting all direct personal data (such as names/lists of reference numbers)

- deleting/rewriting indirectly identifiable data (i.e. an identifying combination of background variables, such as residence/work place, age and gender) - deleting digital audio and video files

Prosjektnr: 43519



# Appendix H: Canadian Ethical Approval Documents

4/15/2016

<https://rise.ubc.ca/rise/Doc/0/NSUJ288EUT84B43GVBESR9T85A/fromString.html>


PROVIDENCE HEALTH CARE  
Research Institute

UBC-Providence Health Care  
Research Institute  
Office of Research Services  
10th Floor Hornby Site - SPH  
c/o 1081 Burrard St.  
Vancouver, BC V6Z 1Y6  
Tel: (604) 806-8567  
Fax: (604) 806-8568

## Providence Health Care Institutional Certificate of Final Approval

<b>PRINCIPAL INVESTIGATOR:</b> David Barbic	<b>DEPARTMENT:</b> UBC/Medicine, Faculty of/Emergency Medicine	<b>UBC REB NUMBER:</b> H15-02216
<b>SPONSORING AGENCIES:</b> UBC Department of Emergency Medicine - "Partial funding from Borregaard, Forskningsfond, Oslo Norway. (\$1500) <a href="http://www.borregaard.no/Forskning/Borregaards-Forskningsfond">http://www.borregaard.no/Forskning/Borregaards-Forskningsfond</a> "		
<b>PROJECT TITLE:</b> Occupational Stress and Burnout in the Emergency Medicine Profession:A Qualitative Study among Canadian Emergency Physicians		
<b>Ethics Certificate Released:</b> November 20, 2015		
<p><b>PHC Institutional Approval Date: November 20, 2015</b></p> <p>The UBC-PHC Research Ethics Board granted ethical approval for the above-referenced research project on the date stated above. All necessary hospital department/facilities approvals and institutional agreements/contracts are now in place and you have permission to begin your research. *</p> <p><b>Dr. Robert Sindelar</b> VP Research &amp; Academic Affairs, Providence Health Care President, PHC Research Institute</p>		
* PHC Health Information Management requires a copy of this certificate prior to granting access to records.		

St. Paul's Hospital  
Holy Family Hospital  
Mount St. Joseph's Hospital  
St. Vincent's Hospital-Brock Fahrni Pavilion  
St. Vincent's Hospital-Langara  
Youville Residence