BMJ Open

Organizational Factors Associated with Burnout Amongst Emergency and Internal Medicine Physicians: A Qualitative Analysis

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2024-085973
Article Type:	Original research
Date Submitted by the Author:	02-Mar-2024
Complete List of Authors:	Ghaseminejad, Farhad; The University of British Columbia Rich, Kira; University of British Columbia, Department of Emergency Medicine Rydz, Emilia; University of British Columbia, Department of Emergency Medicine Chow, Lawrence; University of British Columbia, Department of Medicine Salmon, Amy; University of British Columbia Palepu , Anita; University of British Columbia, Department of Medicine; University of British Columbia Dodek, Peter; University of British Columbia; University of British Columbia, Department of Medicine Leitch, Heather A.; University of British Columbia, Department of Medicine Townson, Andrea; University of British Columbia, Department of Medicine Lacaille, Diane; University of British Columbia, Department of Medicine Varshney, Vishal; University of British Columbia, Department of Anesthesiology Pharmacology and Therapeutics Stanger, Elizabeth; Providence Health Authority Khan, Nadia; University of British Columbia; University of British Columbia, Department of Medicine Rosenbaum, Debbie; The University of British Columbia, Medicine
Keywords:	Burnout, Professional, Physicians, Burnout

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Organizational Factors Associated with Burnout Amongst Emergency and Internal Medicine Physicians: A Qualitative Analysis

Farhad Ghaseminejad MSc[1], Kira E. Rich MD[2], Debbie Rosenbaum MD[3], Emilia Rydz MD[2], Lawrence Chow MD[3], Amy Salmon PhD[4], Anita Palepu MD MPH[3,4], Peter Dodek MD MHSc[4,5], Heather A. Leitch MD PhD[6], Andrea Townson MD[7], Diane Lacaille MD MHSc[8], Vishal P. Varshney MD[9], Elizabeth Stanger[10], Nadia A. Khan MD MSc[1,3]

[1]Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada
[2]Department of Emergency Medicine, University of British Columbia, Vancouver, BC, Canada
[3]Division of General Internal Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[4]Centre for Health Evaluation and Outcomes Science, University of British Columbia, Vancouver, BC, Canada
[5]Division of Critical Care Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[6]Division of Hematology, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[7]Division of Physical Medicine and Rehabilitation, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[8]Division of Rheumatology, Department of Medicine, University of British Columbia; Arthritis Research Canada.
[9]Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia, Vancouver, BC, Canada
[10]St. Paul's Hospital, Providence Health Authority, Vancouver, BC, Canada

Word Count: 2996
Abstract: 296
References: 37
Figures:1
Tables: 4

Co-Author Email Addresses:
farhadgt@student.ubc.ca
kirarich@gmail.com
debsrosen@gmail.com
emi.rydz@gmail.com
lchow@alumni.ubc.ca
asalmon@advancinghealth.ubc.ca
apalepu@hivnet.ubc.ca
peter.dodek@ubc.ca
hleitch@pacifichematology.ca
andrea.townson@vch.ca
dlacaille@arthritisresearch.ca
vvarshney@providencehealth.bc.ca
estanger@providencehealth.bc.ca
nakhanubc@gmail.com

Address for Correspondence:
Farhad Ghaseminejad MSc
1901-535 Smithe Street
Vancouver, BC, V6B0H2
P:778 986-7050
Email: farhadgt@student.ubc.ca

ABSTRACT

Objective: To identify physician perspectives on factors associated with physician burnout, protective factors against burnout, and to seek potential solutions for this pervasive problem.

Design, Setting and Participants: Physicians from general internal medicine (GIM) and the emergency department (ED) at two urban tertiary care hospitals in Vancouver, Canada were recruited. Separate GIM and ED facilitated online focus groups were conducted. Transcribed audio recordings from focus group sessions were systematically analyzed using framework analysis.

Main Outcomes and Measures: The cardinal causes of physicians' burnout are primarily rooted in organizational factors, calling for appropriate interventions to be carried out at an organization level.

Results: 41 physicians (29 GIM and 12 ED) participated in the focus groups. The dominant themes for organizational factors attributed to burnout that were highlighted by both groups included heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Other contributing factors that were only emphasized by GIM physicians were pressure to work out-of-scope of their practice, pressure to admit and discharge patients quickly, as well as sexism in the workplace. Factors unique to ED physicians included experiencing violence in the workplace and having to assess patients in waiting rooms. Protective organizational factors included time to build rapport with patients, staff collegiality, working within their scope of practice, and feeling rewarded and valued by leadership.

Interventions suggested by physicians included improving channels of communication between staff, increasing flexibility in scheduling, and strengthening hospitalists' services.

Conclusion and Relevance: Most organizational factors driving burnout were common to both GIM and ED physicians, including heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Leveraging protective factors and intervening on organizational factors attributed to burnout such as improving communication and enhancing support services may be effective in addressing the physician burnout epidemic.

Strengths and Limitations

- Multiple standardized focus group interviews were carried out and framework analysis was utilized to identify key minor and major themes converging from each focus group, providing a comprehensive understanding of physicians' perspective on burnout.
- It is challenging to assign value to each of the themes identified from focus groups or individuals within each group. Even though most themes were selected because they were more frequently mentioned, it is unclear which organizational factor contributes the most to burnout and ultimately, which intervention would be most effective in reducing burnout.

INTRODUCTION

The burnout phenomenon is defined by Maslach *et al.* as a syndrome characterized by depersonalization, emotional exhaustion, and perceived low sense of accomplishment [1]. A systematic review of 33 qualitative studies on physicians' perspectives on burnout ranked stress factors contributing to burnout as first organizational, then relational, and lastly individual [2]. Organizational factors included heavy workloads, high amount of paperwork, and insufficient time for physicians to spend with their patients and to attend to their personal lives [3–5]. Relational factors referred to the conflict between professionals in decision-making. These conflicts often arise due to differences in opinion and disagreements between different departments and services. Lastly, a few studies suggested individual factors such as burden of responsibility, feelings of guilt, helplessness and doubt about abilities also contributed to physician burnout [6,7].

Increasing prevalence of physician burnout have been reported across the world, with a prevalence as high as 67% in 2022 at hospitals in Canada [8]. Burnout contributes to the physician shortages observed throughout Canada [9]. The Canadian Medical Association's national physician health survey in 2021 reported that 49% of respondents considered reducing their clinical hours in the near future, and those who experienced more burnout were more likely to express their intention to reduce clinical hours compared to physicians who did not report burnout [10]. Therefore, improving physician wellness is now a priority for health care systems. Although causes of burnout in physicians is multifactorial, organizational factors have been reported as more important than individual factors such as impaired coping skills or lack of resilience among physicians [11]. Although most wellness interventions have focused on improving individual-level

factors such as physicians' personal behaviors and skills, organisational changes may contribute to greater and more long-term improvements in wellbeing [12]. However, there are currently few published data about specific organizational factors that contribute to physician burnout [13]. To fill this gap, we conducted a qualitative study to identify the driving factors of physician burnout, organizational factors that are protective, and physician-derived solutions to these issues using focus groups of general internal medicine (GIM) and emergency department (ED) physicians. These specialties were chosen because little is known about causes of burnout in hospital-based physicians [14]; most studies have focussed on primary care providers [15,16]. Additionally, GIM and ED physicians often collaborate, and they experience high rates of burnout as front-line care providers. Here, we report our findings from a framework analysis of our focus group interview data.

METHODS

Study design

We used a qualitative research design with semi-structured independent focus group interviews analyzed using the Framework Method [17,18]. The consolidated criteria for reporting qualitative research (COREQ) were followed [19].

Setting, Participants and Recruitment

Physicians from GIM and ED groups at two tertiary care urban academic hospitals in Vancouver, British Columbia, Canada were invited to participate in the study. The division of General Internal Medicine includes 55 physicians, and the Department of Emergency Medicine includes 43 physicians who work at one or both of these hospitals. Given that the interviews were meant to provide a safe space for discussing organizational issues, physician leaders were excluded from participating in the focus groups. Physicians were sent an email from physician peers within each group inviting them to participate and all physicians received remuneration for their time.

Interview Guide and Focus group interviews

The interview guide was developed by a review of the literature, and content experts in physician wellness, moral distress, and qualitative research methodology. The guide was further refined with feedback and pilot tested with the other physician members of the research team to enhance reliability, clarity, and answerability.

An experienced female facilitator was responsible for facilitating the focus groups from July 2021-Dec 2022. The facilitator was a project manager working at the health authority in British Columbia with expertise in diversity, inclusion, and equity. Focus groups were held virtually via the Zoom© platform during the COVID-19 pandemic. The duration of each interview session was approximately 90 minutes. Interviews were continued until no new themes emerged. Audio was recorded and transcribed using Otter.AI, Inc. (Mountain View, California) and reviewed and validated by the facilitator. The transcripts were then de-identified by the facilitator. No repeat interviews were conducted.

Framework analysis

Written transcripts recorded from focus group sessions were systematically analyzed using framework analysis, as described by Ritchie and Spencer [20]. The five key steps of framework analysis are data familiarization, framework identification, indexing, charting, and mapping/interpretation [21–24]. De-identified transcripts were initially reviewed thoroughly by two independent data coders and key concepts and patterns were highlighted. Reflective notes and impressions were made based on the depth and recurrence of the topics discussed. After this data familiarization step, the highlighted themes by the reviewers were cross-referenced and core themes were selected. The broad categories were defined from our research questions and the themes emerged from reviewing the transcripts. Once the themes were selected and agreed upon by the reviewers, a table was made for each of the broad categories where the rows listed the selected themes, and the columns were labelled GIM and ED. Findings from the three GIM and two ED focus groups were compiled respectively, and differences and similarities between the GIM and ED groups were tabulated. Direct quotes from all transcripts in support of each theme

were selected and assigned in corresponding cells of the tables. This organization also allowed for a more objective comparison of evidence gathered from the two groups of physicians. Lastly, interpretation of the framework matrix was done based on contributions of the entire research team through multiple revisions and impressions. Framework analysis was conducted manually. The most frequently recurring themes were reported as major themes listed in order of decreasing frequency in the tables.

Patient and public involvement statement

The data collection for this study was done via focus group interviews with licenced physicians in Vancouver, Canada. No patient data were collected for this study. The information of the physicians and their expressed opinions remains confidential and anonymous for their privacy.

RESULTS

Baseline Characteristics

There was a total of 41 GIM (n=29) and ED (n=12) physicians participating in focus groups with 44% women participants (Table 1). The emerging themes from focus group interviews were organized in three major categories of 1. Organization factors that are perceived to drive burnout, 2. Organizational factors that reduce burnout by bringing joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout.

I. Organizational factors that are perceived to drive burnout

Issues in the work environment, relational issues between other physician colleagues and leaders, and workload were found common themes highlighted by both GIM and ED physicians. The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 2.

1. Interruptions and noise

Physicians found frequent interruptions while seeing patients or arranging care plans as a major challenge that affects their time efficiency as well as the quality of care they can provide to patients. Additionally, occupational noise exposure and unsuitable working environments are found to be highly disruptive.

2. Interdepartmental conflict

Frequent disputes and disagreements between different hospital services was another major contributing theme identified. Physicians found the time and energy spent on resolving discrepancies in opinion on consultation and admission decisions to add extra unnecessary pressures to their roles.

3. Heavy workload and scheduling

Heavy workload, poor working hours and conflicting schedules constituted another major theme that was frequently noted by both GIM and ED physicians. Long and poorly scheduled working hours prevent physicians from attending to their personal lives and interests.

4. Feeling undervalued

Feeling undervalued by the leading organizations and other consulting services was a key factor that was suggested as a contributing factor to burnout.

Other less prominent themes that were found to be reported by both GIM and ED physicians included: 1. Bureaucracy and inefficiencies, 2. Non-physician roles, 3. Moral distress from not being able to address the social determinants of health for marginalized populations, 4. COVID-19 global pandemic, 5. Financial structures and remuneration. All emerging themes have been summarized in Figure 1., illustrating the factors that were common to both GIM and ED specialties as well as those that were unique to each. Appendix I includes a list of all associated quotes for each of the major and minor themes.

II. Organizational factors that reduce burnout by bringing joy and satisfaction at work

The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 3. Appendix II includes a list of all associated quotes for each of the major and minor themes.

Feeling valued

Both GIM and ED physicians reported that feeling valued by patients, colleagues, and leaders was a major factor bringing joy to work. Physicians reported having a sense of accomplishment and meaning through skilled patient care.

1. Having sufficient time to build rapport with patients

This theme was reported more frequently in GIM than in ED groups. Physicians found having enough time with patients to build a connection was a one of the satisfying aspects of their job.

2. Collegiality

This theme was reported more frequently in ED than in GIM groups. Physicians reported that supportive work environment and positive interactions with colleagues as major factors that bring joy to their role.

3. Doing physicians' work

Being able to focus on physicians' work, as opposed feeling occupied by non-physician roles was another identified theme. This theme was reported by both GIM and ED groups. Physicians found the opportunity to focus on practicing what they trained for to be another satisfying aspect of their jobs.

III. Actionable interventions to reduce physicians' burnout

Physicians identified a number of solutions to address the identified themes that contribute to burnout. The 26 key interventions were recommended by ED and GIM physicians for each previously described theme are presented in Table 4. Please see Appendix III for a complete list of all suggested direct quotes.

DISCUSSION

Organizational factors are thought to underlie physician burnout especially within hospitals but there are little data identifying these issues. Our study identified four main themes among GIM and ED physicians that contributed to feelings of burnout including 1. Interruptions and noise, 2. Interdepartmental conflict, 3. Heavy workload and scheduling, and 4. Feeling undervalued. The factors that were considered protective were largely the inverse of these: 1. Feeling valued by leadership, 2. Having time to build rapport with patients, 3. Cultivating collegiality and 4. Doing physicians' work. Most of the organizational issues perceived by physicians were common to both groups. Physicians also identified multiple potential strategies to improve wellness.

The first objective was to identify organizational factors that are perceived to drive burnout in physicians. In-line with the systematic review and meta-synthesis of 33 studies on physicians' perspective on burnout [11], we found organizational-level factors to be at the core of contributing factors to physician burnout. Agarwal *et al.* have previously described high quantity of work, non-physician roles, and feeling undervalued by local institutions as contributing factors to burnout in primary care providers [25]. They particularly described the perception of being undervalued as being rooted in lack of boundaries in responsibilities, inadequate communication and collaboration with leadership, and insufficient acknowledgment of the challenges faced by primary care providers [25]. Heavy workload [3,5,26–32], difficult working conditions, lack of time [3,27,29,32,33] and the constant pressure to perform tasks quickly are the most commonly reported organizational contributors to burnout [11]. In our study however, new themes of interruptions and noise as well as interdepartmental conflict emerged as major stressors in the workplace. This is likely because qualitative studies on physician burnout in hospital-based medicine and

particularly GIM and ED specialties are rare, leaving such fixable problems unidentified and unaddressed. One of the major sources of interdepartmental conflict is the frequent disagreement between services and the pressure to admit patients while both sides are overwhelmed and are not well supported. Although practically this issue arises between individuals, it is the organizational structure and process that places physicians on opposite sides of conflicts. Similarly, the recurrent theme of interruptions and noise, appears to be intertwined with conflicts between services where the constant back and forth takes away from physicians' ability to remain focused on patient care and the tasks at hand. Lastly, the other aspect of the interruption and noise complaint is rooted in the over-stimulating and chaotic environment in which hospital-based care providers are required to practice in, an issue that may be less of an issue in primary care settings. With regards to sexism in the workplace, female GIM physicians reported experiencing microaggressions and intimidation from older male staff which directly contributed to their experience of burnout. Gender bias has also been reported previously as a major barrier to career satisfaction by female surgeons and recognized as a risk factor for burnout [7].

Secondly, when exploring protective factors, being rewarded and valued were emphasized by both groups equally. Previous research recognized primary care providers' feelings of being undervalued by local institutions and health care systems as a major contributor to burnout [25]. Another study also identified lack of recognition as a contributor to burnout amongst physicians in French hospitals [14]. Interestingly, having time to build rapport with patients and reducing interruptions were more frequently suggested as protective factors by GIM physicians compared to their ED colleagues. GIM physicians often discussed having time to connect with patients and improving the quality of that time by reducing interruptions as factors that bring satisfaction to

their jobs. Meaningful physician-patient relationships had previously been described as a protective factor against burnout in family physicians, including major themes of patient-centered care, continuity, effective care, trust, and purpose [16]. During the COVID-19 global pandemic, creating such meaningful relationships was further hindered by the widespread use of telehealth and reduced patient time [15]. However, most studies were focused on family physicians and to our knowledge, these pertinent protective factors have not been previously reported from hospital-based providers. On the other hand, the last two identified factors of cultivating staff collegiality and doing physicians' work were more heavily emphasized by ED physicians. They found positive interactions with the staff, interesting cases, and good medicine as key factors that bring joy and satisfaction to their otherwise demanding roles. The concept of collegiality, teamwork and fostering community amongst physicians as an effective way to protect against burnout has also been reported previously [7,25,34]. Although at face value collegiality may appear to be an individual-level factor, evidence suggests that organizational modifications are most influential in cultivating a satisfying and joyful environment for physicians. A recent qualitative study of job and life satisfaction amongst ED physicians suggests that regardless of physicians' self-identification as introverted or extroverted personalities, those with better job satisfaction tended to be more socially connected [35]. Overall, although protective factors that bring joy and satisfaction to physicians are often overlapping, it is important to consider the speciality-specific factors and to strengthen protective factors that are intertwined with the nature of each speciality. Moreover, augmenting areas where physicians find value in their roles and incorporating their perspective in organizational-level decision makings are fundamental in building resiliency against burnout.

Few previous studies have sought the perspective of the practicing physicians on interventions to prevent burnout. Lack of physician input into interventions to improve wellness may also underlie the lack of physician engagement in wellness interventions. Broad recommendations such as reducing and also compensating physicians for the time they spend documenting in the electronic medical record (EMR), expanding support staff, and increasing positivity and collegiality have been described to improve the well-being of health care providers [34]. Others suggested a cultural change from stigmatization and competitiveness to compassion and collaboration, starting from medical school training [36]. Primary care physicians also recommended solutions in another qualitative study around the general themes of fostering community amongst colleagues, advocating for reforms beyond institutions, promoting the primary care providers' voice, and recalibrating expectations and reimbursement levels [25].
In this study, we sought specific solutions from physicians, leading to a list of 26 actionable recommendations to be implemented (Table 4).

Although several informative themes have emerged from this study, our findings are not without limitations. One of the limitations is associated with the question of whether the results can be generalized to other hospitals and departments as organizational issues may reflect local environments, available resources, and the patient populations. However, it is likely that the highlighted issues are common and would resonate with other groups and urban hospitals. Secondly, given the qualitative nature of the study, it is challenging to assign value to each of the themes identified from focus groups or individuals within each group. Even though most themes were selected because they were more frequently mentioned, it is unclear which organizational factor contributes the most to burnout and ultimately, which intervention would be most effective

in reducing burnout. Thirdly, physician leaders were excluded from participating in the focus groups in order to provide a safe space for discussing organization issues. However, it should be noted that leaders may have additional perspectives on organizational issues and their own form of previously reported moral distress [37]. Lastly, although the vast majority of challenges reported in the focus groups appeared to precede the global pandemic, it must be noted that the interviews were conducted in the midst of the pandemic at a time when it had significantly altered the norms of care. Nonetheless, identifying contributing factors to burnout during or prior to the pandemic are crucial and physician burnout is likely an overlooked issue that was particularly brought to attention during the COVID-19 pandemic.

CONCLUSION

Organizational issues that contribute to high rates of burnout in frontline physicians in hospitals include interruptions and noise, interdepartmental conflict, heavy workload, and feeling undervalued by leadership. Most of these contributing factors to burnout are resolvable, many of which can be addressed at low cost. Achieving wellness for health care providers must be a priority focus for health care systems, and organizational change is an important path to improving wellness.

ETHICS STATEMENT: This study was approved by the Providence Health Research Ethics boards H018-02999

FUNDING: This project was funded from the Medical Staff Association at Providence Health Care.

CONFLICTS OF INTEREST: The authors declare that there are no competing interests with this manuscript.

AUTHOR CONTRIBUTIONS: NAK, AP, PD, HL, DL, ES, AS contributed to the design of the study. NAK, ES, DR, ER, VV, KR, AS, AP, AT and DL contributed to data collection and FG, ES and NAK contributed towards analysis. All authors contributed to interpretation of the results, and meaningful contribution to writing and accepting the final manuscript. NAK had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

DATA STATEMENT: Statistical code and dataset available upon request of the corresponding author.

REFERENCES

1. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113. doi:10.1002/JOB.4030020205

2. Kurzthaler I, Kemmler G, Holzner B, Hofer A. Physician's Burnout and the COVID-19 Pandemic—A Nationwide Cross-Sectional Study in Austria. *Front Psychiatry*. 2021;12:784131. doi:10.3389/FPSYT.2021.784131/FULL

3. Hasbrouck MA, Waddimba AC. The work-related stressors and coping strategies of group-employed rural health care practitioners: A qualitative study. *Am J Ind Med*. 2017;60(10):867-878. doi:10.1002/ajim.22753

4. Trockel M, Bohman B, Lesure E, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018;42(1):11-24. doi:10.1007/s40596-017-0849-3

5. Franz CE, Barker JC, Kim K, et al. When help becomes a hindrance: Mental health referral systems as barriers to care for primary care physicians treating patients with Alzheimer's disease. *Am J Geriatr Psychiatry Off J Am Assoc Geriatr Psychiatry*. 2010;18(7):576-585.

6. Prentice S, Elliott T, Dorstyn D, Benson J. Burnout, wellbeing and how they relate: A qualitative study in general practice trainees. *Med Educ*. 2023;57(3):243-255. doi:10.1111/MEDU.14931

7. Lu PW, Columbus AB, Fields AC, Melnitchouk N, Cho NL. Gender Differences in Surgeon Burnout and Barriers to Career Satisfaction: A Qualitative Exploration. *J Surg Res*. 2020;247:28-33. doi:10.1016/J.JSS.2019.10.045

8. Khan N, Palepu A, Dodek P, et al. Cross-sectional survey on physician burnout during the COVID-19 pandemic in Vancouver, Canada: the role of gender, ethnicity and sexual orientation. *BMJ Open*. 2021;11(5):e050380. doi:10.1136/BMJOPEN-2021-050380

9. Li K, Frumkin A, Bi WG, Magrill J, Newton C. Biopsy of Canada's family physician shortage. *Fam Med Community Health*. 2023;11(2):e002236. doi:10.1136/fmch-2023-002236

10. Physician wellness: New 2021 National Physician Health Survey findings — burnout, short-staffing and an overburdened system take their toll. Canadian Medical Association. Accessed November 25, 2023. https://www.cma.ca/physician-wellness-hub/content/physician-wellness-new-2021-national-physician-health-survey

11. Sibeoni J, Bellon-Champel L, Mousty A, Manolios E, Verneuil L, Revah-Levy A. Physicians' Perspectives About Burnout: a Systematic Review and Metasynthesis. *J Gen Intern Med*. 2019;34(8):1578-1590. doi:10.1007/s11606-019-05062-y

12. Fox KE, Johnson ST, Berkman LF, et al. Organisational- and group-level workplace interventions and their effect on multiple domains of worker well-being: A systematic review. *Work Stress*. 2022;36(1):30-59. doi:10.1080/02678373.2021.1969476

13. Cohen C, Pignata S, Bezak E, Tie M, Childs J. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ Open*. 2023;13(6):e071203. doi:10.1136/bmjopen-2022-071203

14. Sibeoni J, Bellon-Champel L, Verneuil L, Siaugues C, Revah-Levy A, Farges O. Workplace environment around physicians' burnout: A qualitative study in French hospitals. *Scand J Work Environ Health*. 2021;47(7):521. doi:10.5271/SJWEH.3977

15. LeSage C. Physician Burnout and the COVID-19 Pandemic: An Analysis of U.S. Primary Care Physicians. *Honors Theses*. Published online June 1, 2022. Accessed May 19, 2023. https://digitalworks.union.edu/theses/2580

16. Hiefner AR, Constable P, Ross K, Sepdham D, Ventimiglia JB. Protecting Family Physicians from Burnout: Meaningful Patient-Physician Relationships Are "More than Just Medicine." *J Am Board Fam Med JABFM*. 2022;35(4):716-723. doi:10.3122/JABFM.2022.04.210441

17. EBSCOhost | 151054114 | Using Framework Analysis in Applied Qualitative Research.

18. Kiernan MD, Hill M. Framework analysis: a whole paradigm approach. *Qual Res J*. 2018;18(3):248-261. doi:10.1108/QRJ-D-17-00008

19. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-357. doi:10.1093/intqhc/mzm042

20. Ritchie J, Lewis J, Lewis P of SPJ, Nicholls CM, Ormston R. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE; 2013.

21. Goldsmith L. Using Framework Analysis in Applied Qualitative Research. *Qual Rep*. Published online June 20, 2021. doi:10.46743/2160-3715/2021.5011

22. Hackett A, Strickland K. Using the framework approach to analyse qualitative data: a worked example. *Nurse Res*. 2019;26(2):8-13. doi:10.7748/nr.2018.e1580

23. Parkinson S, Eatough V, Holmes J, Stapley E, Midgley N. Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qual Res Psychol*. 2016;13(2):109-129. doi:10.1080/14780887.2015.1119228

24. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13(1):117. doi:10.1186/1471-2288-13-117

25. Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional Dissonance and Burnout in Primary Care: A Qualitative Study. *JAMA Intern Med*. 2020;180(3):395-401. doi:10.1001/JAMAINTERNMED.2019.6326

26. Sibeoni J, Orri M, Valentin M, et al. Metasynthesis of the Views about Treatment of Anorexia Nervosa in Adolescents: Perspectives of Adolescents, Parents, and Professionals. *PLoS ONE*. 2017;12(1):e0169493. doi:10.1371/journal.pone.0169493

27. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of qualitative literature: Lessons learnt. *BMC Med Res Methodol*. 2008;8:21. doi:10.1186/1471-2288-8-21

28. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol*. 2012;12:181. doi:10.1186/1471-2288-12-181

29. Chenail RJ. Learning to Appraise the Quality of Qualitative Research Articles: A Contextualized Learning Object for Constructing Knowledge. *Qual Rep*. 2011;16(1):236-248.

30. Petek D, Gajsek T, Petek Ster M. Work-family balance by women GP specialist trainees in Slovenia: a qualitative study. *BMC Med Educ*. 2016;16:31. doi:10.1186/s12909-016-0551-2

31. Beng TS, Chin LE, Guan NC, et al. The experiences of stress of palliative care providers in Malaysia: a thematic analysis. *Am J Hosp Palliat Care*. 2015;32(1):15-28. doi:10.1177/1049909113503395

32. Çiçeklioğlu M, Öcek ZA, Turk M, Taner Ş. The influence of a market-oriented primary care reform on family physicians' working conditions: A qualitative study in Turkey. *Eur J Gen Pract*. 2015;21(2):97-102. doi:10.3109/13814788.2014.966075

33. McGowan Y, Humphries N, Burke H, Conry M, Morgan K. Through doctors' eyes: a qualitative study of hospital doctor perspectives on their working conditions. *Br J Health Psychol*. 2013;18(4):874-891. doi:10.1111/bjhp.12037

34. Dillon EC, Tai-Seale M, Meehan A, et al. Frontline Perspectives on Physician Burnout and Strategies to Improve Well-Being: Interviews with Physicians and Health System Leaders. *J Gen Intern Med*. 2020;35(1):261-267. doi:10.1007/S11606-019-05381-0/TABLES/2

35. Kase J, Doolittle B. Job and life satisfaction among emergency physicians: A qualitative study. *PLOS ONE*. 2023;18(2):e0279425. doi:10.1371/JOURNAL.PONE.0279425

36. Walsh G, Hayes B, Freeney Y, McArdle S. Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors. *BMJ Open*. 2019;9(9):e030209. doi:10.1136/BMJOPEN-2019-030209

37. Mitton C, Peacock S, Storch J, Smith N, Cornelissen E. Moral distress among health system managers: exploratory research in two British Columbia health authorities. *Health Care Anal HCA J Health Philos Policy*. 2011;19(2):107-121. doi:10.1007/s10728-010-0145-9

FIGURE LEGEND

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

Table 1. Focus group participants demographics

Demographic	GIM Hospital 1 (n=16)	GIM Hospital 2 (n=13)	ED FG1 Hospital 1 (n=12)
Age years			
35-49	15	12	8
>50	1	1	4
Sex			
Woman	6	6	6
Man	10	7	6

Table 2. Major emerging themes and associated key quotes for organizational factors that drive burnout.

Major Theme	Key Quotes
1. Interruptions and noise	• Ex 1. *"The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value."* (GIM) • Ex 2. "*The other thing that has been a real pebble in my shoe lately is […] in terms of electronic devices and telephones in the hospital […]. In the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and here in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time, watching videos without headphones. And it's very disruptive."* (ED)
2. Interdepartmental conflict	• Ex 1. *"You are fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner."* (GIM) • Ex 2. *"One area that I still fear, and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because in internal medicine, we have such a broad mandate"* (GIM) • Ex 3. "*I know the person that just checked in with an eye problem at 11pm, they might get seen at 10 in the morning… it is so discouraging to go into there."* (ED)
3. Heavy workload and scheduling	• Ex 1. "*I think weekends are some of the worst times for faculty… We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team… and then you're often on call that night, then have to be back the next morning. So, I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week."* (GIM) • Ex 2. *"There's no such thing as a daycare that opens up at 7:00 [which] rules out a lot of dual physician family and or people with a kid in daycare and a partner… it makes life extremely more*

	difficult. When really, we don't need to be there at 7:30 for patient care." (GIM) • Ex 3. *"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly"* (ED)
4. Feeling undervalued	• Ex 1. *"Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes… on top of that you have to care for and role model for residents and medical students… and I don't think it's valued or recognized by the organization."* (GIM) • Ex 2. *"I do think our time isn't always valued by some of the consultants."* (ED)

Table 3. Major emerging themes and associated key quotes for organizational factors that reduce burnout by bringing joy and satisfaction at work

Major Theme	Key Quotes
1. Feeling valued	• Ex 1. *"[knowing that] you're a valued member of the organization, that if you if you left, you would be missed… [and] you're rewarded for bringing value to the organization"* (ED) • Ex 2. *"It's good to feel like you could make a difference in a patient population… [and] when my skill sets are valued."* (GIM)
2. Having sufficient time to build rapport with patients	• Ex. 1. *"The sense of connection that I had to the patient and the gratitude that this patient expressed [was what I found] satisfying."* (GIM) • Ex. 2. *"Having a patient actually know who I am and remember who I was, it was just incredible."* (GIM)
3. Collegiality	• Ex 1. *"Just the interaction I got with all the staff and the collegiality… everyone is friendly, smiling, and helpful."* (ED) • Ex. 2. *"Colleagues that you can trust and turn to bounce things off of".* (ED)
4. Doing physicians' work	• Ex. 1. *"When someone's sick… [doing] something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day."* (ED) • Ex 2. *"Sense of getting to use my skills and training to help this person"* (GIM)

Table 4. All 26 key actionable interventions suggested by GIM and ED physicians to reduce burnout, listed in correspondence to the emerging themes.

Theme	Suggested intervention
Workload and scheduling	1. *"A communication app, where individuals would sign-in to their role in the hospital every given day"* (GIM) 2. *"Having a hospitalist to help with the load"* (GIM) 3. *"A way to redirect phone calls so that they're batched or prioritized."* (GIM) 4. *"Flexibility in scheduling… having locums to take unwanted call shifts/weekends"* (GIM) 5. *"Post-call days or wellness days"* (GIM) 6. *"Rather than us calling five different [people] there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low-lying fruit that is contributing to our burnout, for sure."* (ED)
Interruptions and noise	7. *"We need to alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office or at the dermatologists."* (ED)
Interdepartmental conflict	8. *"Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them […] like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay."* (GIM) 9. *"Cultural change within surgical services […] more buy in from higher ups in terms of surgical services, like accepting the actual surgical issues […] it would be nice for the surgical services to take ownership of their patient."* (GIM) 10. *"Defining boundaries of our specialty (i.e., admission criteria)"* (GIM) 11. *"Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care."* (GIM) 12. *"Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER."* (GIM) 13. *"Culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or*

	three in the morning, just like just like we do when we're awake there." (ED)
Bureaucracy and inefficiencies	14. *"More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders."* (GIM) 15. *"Reducing the amount of administration with order entry with Cerner."* (GIM)
Non-physician roles	16. *"Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker, housecleaners, porters)"* (GIM and ED) 17. *"Have a chronic clinical associate or like nurse practitioner on each team."* (GIM) 18. *"Workforce planning and hiring enough people for the future."* (GIM) 19. *"Have people ED to help [patients] fill out the paperwork for housing, get them better clothes, get them better food."* (ED) 20. *"A social/behavioural ICU"* (ED)
Patient Experience in the Waiting room	21. *"Having a quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."* (GIM) 22. *"Waiting room better staffed, maybe with someone who's looking after these patients, watching out for, you know, signs of people escalating, people becoming more violent."* (ED)
Financial structures and remuneration	23. *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied… So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load."* (GIM) 24. *"Improving remuneration to attract fellows to live/work in Vancouver."* (GIM)
Violence against physicians	25. *"Physical barriers to actually protect [physicians]."* (ED) 26. *"Offsite opiate overdose [and] sobering units"* (ED)

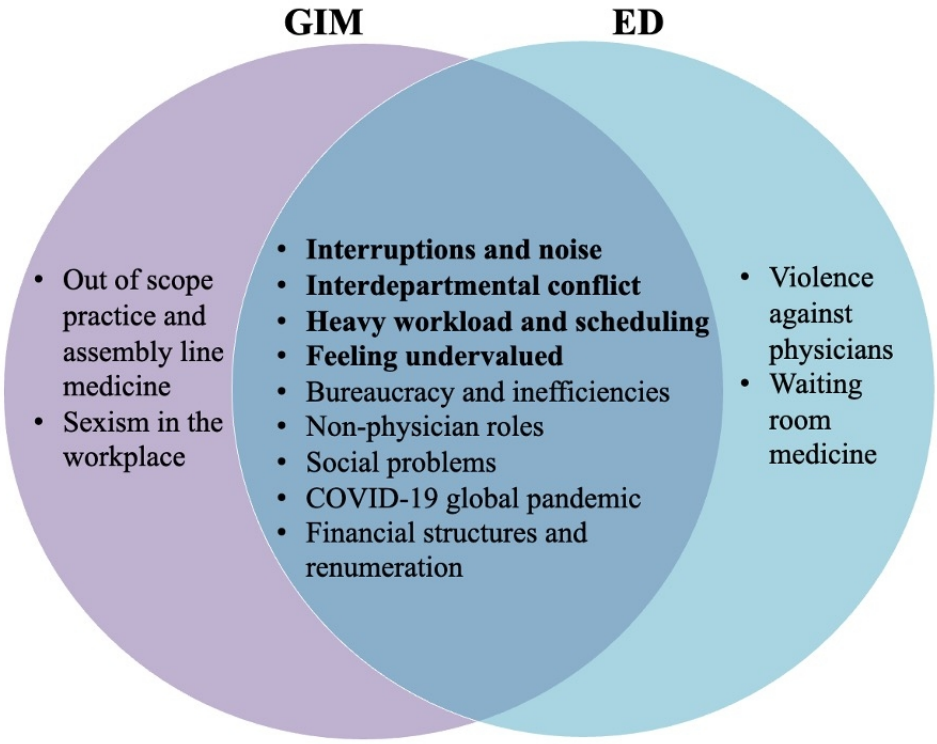

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

165x127mm (144 x 144 DPI)

APPENDIX I

Category I: Contributing Factors to Burnout

Theme	GIM	ED
Feeling undervalued	- "Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes." - "Our time and our efforts are less valuable than other doctors in the hospital." - "On top of that you have to care for and role model for residents and medical students…and I don't think it's valued or recognized by the organization." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore."	- *"I do think our time isn't always valued by some of the consultants."
Workload and scheduling	- "Relationship building with the patient and really showing them that we care about them seems to disappear and the exhaustion of the workload and day to day things that I'm now responsible for… the whole process has become very distant and almost impersonal." - "I could work the same number of hours on a different rotation, and I could function I can even have like, personal life after hours. care for my kids but the CTU I can't."	"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly."

	- "One is all the calling and the figuring out about scheduling for patients, when they're going to have their scope, when they're going to have their surgery when a surgical service is going to see them, can I get in touch with a surgical service?" - "The sheer number of patients" - "Holding the front and making sure nobody dies until the next day without really having much time to think about the active issues or if an interesting case has been admitted." - "Hard to establish that that relationship, but at the same time, you're trying to get them out of hospital as soon as you can, when a lot of them don't want to." - "There's no such thing as a daycare that opens up at seven. And so you basically, rules out a lot of dual physician family and or people as a kid in daycare and a partner like it makes life extremely more difficult. When really we don't need to be there at 730 for patient care." - *"When you think about your job, as a teacher, your job as a physician, and then also you're kind of having to always engage with the emergency department and deal with what's coming, coming in to see to you, it's almost like you've got three jobs that you're trying to do. And then given the complexity, the social complexity of the patients that you're that you're working with…"	

	- "Sometimes when you're just too busy, I find sometimes like, I don't really get that fulfilment from patient interactions, like, it's nice to have that time to, like, be present and, you know, get something personally out of that interaction as well." - "I think coming back to our structure and function on the CTU, I think weekends are some of the worst times for faculty. We're here on the weekends, we are expected to round on the weekends when we're there. We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team. So I think weekends are pretty brutal. And then you're often on call that night, then have to be back the next morning. So I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right." - "I think it's interesting how it's pretty consistent all across the board whether or not you know,	

	we're single, or have a partner or have a dog or kids, I think everybody's life is on hold. I think it affects people differently. I have three kids. And, yeah, and my husband's also in medicine. So it's very, very chaotic. And when I'm on service, I feel like, I feel like, I take a deep breath and go under water for like two weeks, and then come out the other end and mess up everything, many times. dinners, games, extracurriculars for the kids all the weekend stuff, family stuff, it's tough, it's really tough. I had to do less call, I have to give away as much of it as possible or take on less weekend work. " - "Just want to emphasize that phrase that life gets put on hold when you're on service. Because that's, I think, is a very abnormal way of working. You know, everybody else has, you know, a balance where they work and they have their life… like I don't answer my emails, I don't clean my home, I like don't eat well, I don't exercise. And then I try and make up for it on my like week off, which, again, it's not, it's not necessarily the best way to live." - "And that's partially due to agency and lack of control over what we do and do not do. But if you can't take a minute to think through things really thoughtfully. We're internist, we like to think so that's a big part of what we do, or I think wellness, for me."	

Out of scope practice and assembly line medicine	- "We're asked to look after patients that are sort of outside of the range of expertise that we were actually trained in (i.e., trauma patients)." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex." - "I have lots of institutional pressure that's coming at me to move people through and be efficient." - "You kind of get reduced to like a mechanical check, check, check. And on to the next one, like, I find, I really don't get that fulfilment, from, you know, the interaction as much as it should be anyways."	
Interruptions and noise	- "I get woken up, and I have to like deal with some, you know, something like that we're fighting back or disposition issue, like, I can't go back to sleep for a while." - "The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value." - "The Emerg doc at the 11th takes five minutes to interrupt my review with the patients who present this patient, the residents which you know, whatever, but then we say, well, this patient would be	- "An overhead paging system that really sometimes just interrupts you so many times that it interrupts your train of thought." - "The other thing that has been a real pebble in my shoe lately is the fact that in terms of electronic devices and telephones in the hospital, yes, I find where you know, in the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and hear in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time watching

	more appropriate with psychiatry." - "So it's not like you're always standing at a computer where you can enter an order. So you can't you're interrupted, to put in something instead of just saying, Can you give them whatever? And then saying yes, no problem. You have to then interrupt whatever you're doing, go find a computer and do it before you forget, because it's one of 1000 interruptions that has happened in that last hour." - *"It's very frustrating having to deal with all the noise issue..." - "I think one of the strongest visceral reactions I have is when I am distracted in the middle of doing something that I think is important like reviewing it case with a resident or learner. And we're sort of deep in thought and we're having a good time kind of discussing some of the interesting aspects of a case. And then to be pulled away from that by a phone call, or, you know, a nurse coming by and, and just demanding kind of your attention, when you really were kind of in a flow state. And it's hard to have a sustained flow state in the hospital setting, I get it, it's an acute place. But I certainly think there are better ways of managing the distractions and triaging the distractions so that it's not all the time always."	videos without headphones. And it's very disruptive." - "When you dictate and somebody else dictates next to you, they will dictate into your system. So you actually have to like because it's so loud." - "Definitely feeling pressed for time in a number of different ways. One because of the constant interruptions…"
Bureaucracy and inefficiencies	- "Battling the bureaucracy, so to speak, bushwhacking through	- "Some of the technical issues, like having to log in to

	the bureaucracy just to get basic patient care completed."	different systems, I guess you have to log into Paris separately from logging into Cerner." - Dictaphones breaking - Cerner freezing - Broken equipment
Interdepartmental conflict	- *"It's very frustrating having to deal with … the politics and fighting with different services." - "Talking to eight different surgeons to find out somebody who's willing to look after this patient." - "It's hard for me to understand why the opinion of every other consultant in the hospital is more important than my opinion as an internist." - "You're fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner." - "One area that I still fear and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because internal medicine, we have such a broad mandate, there's almost nothing we can't manage short of cutting someone open. Right? Many of these cases, we don't offer much. And the fact that everyone else has the ability to refuse a case and we don't, we are then expected to see the case. This is particularly made worse when	- *"I do think our time isn't always valued by some of the consultants." - "One of the things would be the fact that for a lot of our consultants, the day ends at about 430. And everything, held overnight, which means, you know, we're managing complex elderly patients." - "But I know the person that just checked in with an eye problem at 11pm. They might get seen at 10 in the morning, like literally, he says it is so discouraging to go into there.

	our trainees are facing really heavy loads in the emergency department." - "It takes up so much more of your time to try and deflect a consult and a fight back and to push against the system, that the path of least resistance is often just doing the work and admitting the patient. And you have to decide in that moment, are you going to engage? Or are you not going to engage?" - "I always ask what is the best thing for the patient, right? But at the same time, you don't want to reward the system for handing us crap, right? And so I feel that real problem, that tension and like I said, most times I tell the team just take it because I still think we in the end probably are the best person, but it still feels like we've been abused a little bit, right?" - "You know, one of the big issues that the hospital has dealt with, and our department in particular has dealt with for quite a few number of years, is this pay for performance of the emergency department, which basically forces the department to push patients towards any admitting service. And since internal medicine is the greatest service in the world, that can take care of everyone, we are usually the default when no other service is willing to take patients, because they are either too complex or too sick, or, you know, they are too multi system, or, you know, they're too young. There's been	

	instances where patients are not adequately evaluated, or worked up and then just deflected or deferred to Internal Medicine Service to do their job, because they feel the pressure to push them along, because they get paid more, you know, that that department makes more money for their activities. So it's a way and it doesn't benefit us in any way, except just adds to our stress - "Like the number of times where I've just been pushed to admit somebody that I'm not done assessing or just maybe needs a few hours in the ER and could avoid being admitted, is incredible. And that it just it defeats logic. Sometimes, it's just simply like, 'Get out of my Emerg I don't care if the patient only needs two more hours.' You know. it's actually really an important part of something small, that could be fixed that would add a lot of positivity to our quality of life"	
Social problems	- "I think part of the problem is that people don't have to be as accountable with some of our individuals who cannot advocate for themselves." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex."	- "Sometimes people come in, because they're hungry, or because they want a cheese sandwich or a blanket or something. And even though I know they need that, for me, it doesn't give me a sense of satisfaction at the end of the day, as opposed to having someone who's medically ill."
Non-physician roles	- "We need to move patients, we need to make room, we need to	- "I'm constantly coming up against logistical barriers, like

	have ways to discharge people. And so that's what makes it like a s to me, because I'm just the manager, you know, I'm, I'm not practicing medicine at that point." - "… you're also kind of playing social worker at the same time."	I can't find the patient, I have to change the bed myself. There's no nurse to help." - "Portering, changing sheets, cleaning up garbage. Other things I've heard are things like doing nursing assessments, because there's maybe not enough time, even for the nurse to do an assessment." - "Having to run around and find the patient, changing your own sheets cleaning up through, you know, cleaning up the bay or the room for the patient." - "Having to bring them into a stretcher that is messily made by me with garbage on the floor that I've tried to clean up but haven't had time to clean up completely." - *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."
Violence Risk		- "I have seen a bit more agitated patients that are placing staff at risk - like we're just held to the standards, it's versus we don't have a system in place to make us feel safe to assess that patient." - "Biggest thing that is not working is our approach to violence in the emergency department."
Waiting room medicine		- "We do have a problem with the triage and because we don't have enough physical

		space to put patients into beds, so sometimes the triage is quite questionable. So for example, suicidal patients put in the waiting room." - "a care space that is not appropriate for their illness, and then have to ask them to go back to a waiting room full of people who are maybe intoxicated or experiencing other illnesses and maybe not an appropriate space for them." - "There's literally not a single space where you can assess a patient. So it's like, how are we supposed to be to our job if we don't have spaces to assess patients" - "Patients have no privacy. There's nowhere to examine them. There's nowhere to address them."
COVID-19 pandemic effect	- "And I'm hearing like, we may be asked to even offer more because we were able to take COVID like a champ. That worries me… like we could burn out and we can become more and more inclusive of what we're doing and not have our boundaries and not be a specialty anymore. So as we do restructuring, as we talk about our capacity to take care of our patients, we also have to talk about our, our skill set, what our, what our boundaries are. "	- "We in the emergency have piled on risk upon us, like we are facing more risk than we did in the past. And I just, that became very obvious to me in the pandemic."
Sexism in the workplace	- "This may not be a very popular thing to say. But I think sexism does still exist to in the workplace... But as a woman, I think there are	

	potentially more opportunities to get frustrated because of the way you might be treated, or the nurses not respecting your authority as much as your white male colleague, for example, or pushback you get on the phone. So I think that might also play into kind of wearing down faster." - "Ya, like [they] said, I definitely see a difference in the workplace in the way my female colleagues are treated than how I'm treated from other physicians. Definitely from nursing staff and allied health. And so I think that that It has to contribute to how people end up experiencing burnout." - "I would also echo that there's a lot of intimidation from surgeons, male, older, towards female physicians. And it might not be very, it's not like very discreet necessarily. It's just, it's kind of like microaggressions. And, yeah, it's definitely there."	
Financial structures and remuneration	- "And so that struggle between how much should we make for the work versus how much work is reasonable for us to do at once? I think is really is really tough… But I think that that tension is really hard to get away from. And, and it always feels like oh, if I just see one more, or if I stay a little bit longer tonight than I can make a bit more of it. But a lot of that doesn't lead to good care and doesn't lead to us feeling healthy."	- *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."

	- *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right."	
Lack of camaraderie for difficult cases	- *"I talked about this, the council of the elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really	-

	well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX II

Category II: Protective Factors that Bring Joy and Satisfaction to Physicians

Theme	GIM	ED
Being rewarded and valued	- "It's good to feel like you could make a difference in a patient population." - "When my skill sets are valued."	- "You're a valued member of the organization, that if you if you left, you would be missed." - "You're rewarded for bringing value to the organization."
Having time to build rapport with patients	- "To connect with the person, and they felt they felt sort of heard in the end, we were able to sort of events, events, things, and it was that connection with the patient that, that I found sort of satisfying." - "The sense of connection that I had to the patient and the gratitude that this patient expressed." - "And having a patient actually know who I am and remember who I was, it was just incredible."	- "Positive interactions with the patients'
Reducing interruptions	- "Having time to interact with patients without being interrupted."	
Staff collegiality	- "I love my colleagues"	- "Positive interactions with the staff" - "Such wonderful colleagues everywhere. Like, literally everyone is friendly, smiling, and helpful." - "Just the interaction I got with all the staff and the collegiality." - "Colleagues that you can trust and turn to bounce things off"

Doing physicians' work	- "Sense of getting to use my skills and training to help this person"	- "When someone's sick, might actually do something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day." - "Interesting cases and good medicine, as well as, as well as patient satisfaction, but and, you know, and good outcomes."

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX III

Category III: Actionable Interventions to Reduce Burnout.

Theme	GIM	ED
Workload and scheduling	- "Communication app, basically where individuals would sign in to their role in the hospital every given day" - "Having a hospitalist to help with the load." - *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized." - Flexibility in scheduling (having locums to take unwanted call shifts/weekends) - "post-call" days or wellness days	- "Rather than us calling five different there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low lying fruit that is contributing to our burnout, for sure."
Interruptions and noise	- *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized."	- "I think we need to, you know, alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office at the dermatologists."
Bureaucracy and inefficiencies	- "More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders." - "Reducing like the amount of administration with order entry with Cerner."	

Interdepartmental conflict	- "Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them. So something like might look like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay." - "Cultural change within surgical services." - "More buy in from higher ups in terms of surgical services, like accepting the actual surgical issues, because I've taken care of many surgical issues on CTU, even post op, they come back to CTU. Like it would be nice for the surgical services to take ownership of their patient." - Defining boundaries of our specialty (ie. Admission criteria) - Interdepartmental relationships: Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care. - Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER (the participant cited that this exists at the Mayo clinic).	- "It'd be nice to the culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."

Social problems		- "A social/behavioral ICU" - "Improved social support person."
Non-physician roles	- "Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker)" - "It would be nice to have like a chronic clinical associate or like nurse practitioner on each team." - Workforce planning and hiring enough people for the future.	- "Can we get more cleaners? Could we get more porters, that kind of thing." - "Trying to get us another staff member. to rise to get patients to where you can examine them and have them ready for examination and helping you get what you need to get that patient through so that you're not doing as many non-clinical tasks. -- an LPN is probably the most ideal." - "More housecleaners" - "Have people emerge and help them fill out the paperwork for housing, get them better clothes… get them better food than the sandwiches and things are not made with real food."
Violence Risk		- "Physical barriers to actually protect." - "Offsite opiate overdose unit" - "Offsite sobering units"
Waiting room medicine	- "Having quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."	- "Waiting room better staffed, maybe with someone who's like looking after these patients like watching out for, you know, signs of people escalating, people becoming more violent."
Financial structures and remuneration	- *"Recently on CTU (clinical teaching unit), we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time	

	to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - "So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load. Because really what strikes us as the most stress is when we're dealing with a lot of sick patients, a lot of training needs, and we don't have enough time. " - Improving remuneration to attract fellows to live/work in Vancouver. - Consider moving away from FFS (fee for service) and adopting AFP (alternate funding plan), or a mixed model. - Pay for time and quality, not clinical load	
Lack of camaraderie for discussing difficult cases	- Attending monthly rounds to discuss difficult cases or to just check in => *"I talked about this, the council of the	

	elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

BMJ Open

Organizational Factors Associated with Burnout Amongst Emergency and Internal Medicine Physicians: A Qualitative Study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2024-085973.R1
Article Type:	Original research
Date Submitted by the Author:	14-Oct-2024
Complete List of Authors:	Ghaseminejad, Farhad; The University of British Columbia Rich, Kira; University of British Columbia, Department of Emergency Medicine Rosenbaum, Debbie; The University of British Columbia, Medicine Rydz, Emilia; University of British Columbia, Department of Emergency Medicine Chow, Lawrence; University of British Columbia, Department of Medicine Salmon, Amy; University of British Columbia Palepu , Anita; University of British Columbia, Department of Medicine; University of British Columbia Dodek, Peter; University of British Columbia; University of British Columbia, Department of Medicine Leitch, Heather A.; University of British Columbia, Department of Medicine Townson, Andrea; University of British Columbia, Department of Medicine Lacaille, Diane; University of British Columbia, Department of Medicine Varshney, Vishal; University of British Columbia, Department of Anesthesiology Pharmacology and Therapeutics Stanger, Elizabeth; Providence Health Authority Khan, Nadia; University of British Columbia; University of British Columbia, Department of Medicine
Primary Subject Heading:	Health services research
Secondary Subject Heading:	Health policy
Keywords:	Burnout, Professional, Physicians, Burnout

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Organizational Factors Associated with Burnout Amongst Emergency and Internal Medicine Physicians: A Qualitative Study

Farhad Ghaseminejad MSc[1], Kira E. Rich MD[2], Debbie Rosenbaum MD[3], Emilia Rydz MD[2], Lawrence Chow MD[3], Amy Salmon PhD[4], Anita Palepu MD MPH[3,4], Peter Dodek MD MHSc[4,5], Heather A. Leitch MD PhD[6], Andrea Townson MD[7], Diane Lacaille MD MHSc[8], Vishal P. Varshney MD[9], Elizabeth Stanger[10], Nadia A. Khan MD MSc[1,3]

[1]Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada
[2]Department of Emergency Medicine, University of British Columbia, Vancouver, BC, Canada
[3]Division of General Internal Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[4]Centre for Health Evaluation and Outcomes Science, University of British Columbia, Vancouver, BC, Canada
[5]Division of Critical Care Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[6]Division of Hematology, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[7]Division of Physical Medicine and Rehabilitation, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[8]Division of Rheumatology, Department of Medicine, University of British Columbia; Arthritis Research Canada.
[9]Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia, Vancouver, BC, Canada
[10]St. Paul's Hospital, Providence Health Authority, Vancouver, BC, Canada

Word Count: 3637
Abstract: 286
References: 47
Figures:1
Tables: 4

Co-Author Email Addresses:
farhadgt@student.ubc.ca
kirarich@gmail.com
debsrosen@gmail.com
emi.rydz@gmail.com
lchow@alumni.ubc.ca
asalmon@advancinghealth.ubc.ca
apalepu@hivnet.ubc.ca
peter.dodek@ubc.ca
hleitch@pacifichematology.ca
andrea.townson@vch.ca
dlacaille@arthritisresearch.ca
vvarshney@providencehealth.bc.ca
estanger@providencehealth.bc.ca
nakhanubc@gmail.com

Address for Correspondence:
Farhad Ghaseminejad MSc
1901-535 Smithe Street
Vancouver, BC, V6B0H2
P:778 986-7050
Email: farhadgt@student.ubc.ca

ABSTRACT

Objective: To identify physician perspectives on factors associated with physician burnout, protective factors against burnout, and to seek potential solutions for this pervasive problem.

Design: A qualitative study with semi-structured focus group interviews using a systematic framework analysis

Setting and Participants: Physicians from general internal medicine (GIM) and the emergency department (ED) at two urban tertiary care hospitals in Vancouver, Canada were recruited. Separate GIM and ED physician focus groups were conducted virtually from July 2021-Dec 2022, led by an independent facilitator. Audio recordings from focus group sessions were then transcribed for analysis.

Results: 41 physicians (29 GIM and 12 ED) participated in the focus groups. The dominant themes for organizational factors attributed to burnout that were highlighted by both groups included heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Other contributing factors that were only emphasized by GIM physicians were pressure to work out-of-scope of their practice, pressure to admit and discharge patients quickly, as well as sexism in the workplace. Factors unique to ED physicians included experiencing violence in the workplace and having to assess patients in waiting rooms. Protective organizational factors included time to build rapport with patients, staff collegiality, working within their scope of practice, and feeling rewarded and valued by leadership. Interventions suggested by physicians included improving channels of communication between staff, increasing flexibility in scheduling, and strengthening hospitalists' services.

Conclusions: Most organizational factors driving burnout were common to both GIM and ED physicians, including heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Leveraging protective factors and intervening on organizational factors attributed to burnout such as improving communication and enhancing support services may be effective in addressing the physician burnout epidemic.

Strengths and Limitations

- Multiple standardized focus group interviews were carried out, providing physician perspectives on specific systems issues in a hospital setting driving physicians burnout.
- Comparison and contrasting systems issues experienced by physicians that provide significant services in hospitals, the Emergency Department and General Internal Medicine.
- Physician perspectives on possible solutions to systems issues were collected that may be helpful in organizational initiatives for improving physician wellness.
- Systematic framework analysis was applied to identify themes converging from each focus group.
- Findings may not be generalized to other non-teaching hospitals or health systems or to other specialties.

INTRODUCTION

The burnout phenomenon is defined by Maslach *et al.* as a syndrome characterized by depersonalization, emotional exhaustion, and perceived low sense of accomplishment [1]. A systematic review of 33 qualitative studies on physicians' perspectives on burnout ranked stress factors contributing to burnout as first organizational, then relational, and lastly individual [2]. Organizational factors included heavy workloads, high amount of paperwork, and insufficient time for physicians to spend with their patients and to attend to their personal lives [3–5]. Relational factors referred to the conflict between professionals in decision-making. These conflicts often arise due to differences in opinion and disagreements between different departments and services. Lastly, a few studies suggested individual factors such as burden of responsibility, feelings of guilt, helplessness and doubt about abilities also contributed to physician burnout [6,7].

Increasing prevalence of physician burnout have been reported across the world, with a prevalence as high as 67% in 2022 at hospitals in Canada [8]. Burnout contributes to the physician shortages observed throughout Canada [9]. The Canadian Medical Association's national physician health survey in 2021 reported that 49% of respondents considered reducing their clinical hours in the near future, and those who experienced more burnout were more likely to express their intention to reduce clinical hours compared to physicians who did not report burnout [10]. Therefore, improving physician wellness is now a priority for health care systems. Although causes of burnout in physicians is multifactorial, organizational factors have been reported as more important than individual factors such as impaired coping skills or lack of resilience among physicians [11]. Although most wellness interventions have focused on improving individual-level factors such as physicians' personal behaviors and skills, organisational changes may contribute

to greater and more long-term improvements in wellbeing [12]. However, there are currently few published data about specific organizational factors that contribute to physician burnout [13] and few institutions have employed a comprehensive approach to tackling physician burnout [14].

Our group previously determined that at least 2/3rds of physicians working in the Emergency Department and in General Internal Medicine experienced burnout and systems issues were considered to be the most important factors underlying burnout [8,15]. To understand what specific systems-issues contribute to burnout that may help towards creating a comprehensive approach to addressing burnout in hospitals, we conducted a qualitative study to identify these systems factors, organizational factors that are protective, and physician-derived solutions to these issues using focus groups of general internal medicine (GIM) and emergency department (ED) physicians. These specialties were chosen as less is known on the specific systems causes of burnout in hospital-based physicians [15]; most studies have focussed on primary care providers [17,18]. Additionally, GIM and ED physicians often collaborate, and they experience high rates of burnout as front-line care providers including in our studies. Here, we report our findings from a framework analysis of our focus group interview data.

METHODS

Study design

We used a qualitative research design with semi-structured independent focus group interviews analyzed using the Framework Method [19,20]. The consolidated criteria for reporting qualitative research (COREQ) were followed [21].

Setting, Participants and Recruitment

All physicians from GIM and ED groups at two tertiary care urban academic hospitals in Vancouver, British Columbia, Canada were invited to participate in the study. Given that the interviews were meant to provide a safe space for discussing organizational issues, six physician leaders were excluded from participating in the focus groups from both groups. The division of General Internal Medicine includes 55 physicians (40% women, 75% less than age 50 years), and the Department of Emergency Medicine includes 43 physicians (36% women, 68% aged less than 50 years) who work at one or both of these hospitals. Physicians were sent an initial email from physician peers within each group inviting them to participate, 2 reminder emails over a 6-8 week period. All physicians who agreed to participate in the focus groups were included (29/51= 57% GIM and 12/41=29% ED response rate excluding physician leaders). All physicians received remuneration for their time at standard physician remuneration rates at our hospitals.

Interview Guide and focus group interviews

The interview guide was developed by a review of the literature [22,23] including drawing from the Institute for Healthcare improvement Framework for Improving Joy in Work [24], and Mayo Clinic

work on organizational strategies to improve wellness [25], and content experts in physician wellness, moral distress, and qualitative research methodology from the research team. The guide was further refined with feedback and pilot tested with peer physician members from GIM and ED who later joined the project to enhance recruitment, and to improve reliability, clarity, and answerability of the guide. The interview guide asked questions on 1. Organizational factors that are perceived to drive burnout, 2. Organizational factors bring joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout. The interview guide is included in the supplementary material (Appendix IV).

There were 5 focus groups held with 6 to 13 physicians in each group (three independent GIM physicians and two ED physicians focus groups) from July 2021 to December 2022 in a staggered fashion. An experienced female facilitator (Elizabeth Stanger, MSc.) was responsible for facilitating the focus groups. The facilitator was a project manager working at the health authority in British Columbia with expertise in operations and program planning across multiple hospital-based programs and facilitation in focus groups. The facilitator was not known to the participants. A peer physician who was a member of the project team was also present at each of the focus groups. Focus groups were held virtually via the Zoom© platform during the COVID-19 pandemic. Participants provided verbal consent, and the study was approved by the Providence Health Care Research Ethics Board. The duration of each interview session was approximately 90 minutes. Interviews and number of focus groups were continued until no new themes emerged. Audio was recorded and transcribed using Otter.AI, Inc. (Mountain View, California) and reviewed and validated by the facilitator and the peer physicians. The transcripts were then de-identified by the facilitator. No repeat interviews were conducted. Transcripts and framework analyses were returned to each of the peer physicians who attended each focus group

for any corrections, validation, and to ensure appropriate meaning. The identifying information of individual physicians and their expressed opinions remains confidential.

Framework analysis

Written transcripts recorded from focus group sessions were systematically analyzed using framework analysis, as described by Ritchie and Spencer [26]. The five key steps of framework analysis are data familiarization, framework identification, indexing, charting, and mapping/interpretation [27–30]. De-identified transcripts were initially reviewed thoroughly by two independent data coders and key concepts and patterns were highlighted. Reflective notes and impressions were made based on the depth and recurrence of the topics discussed. After this data familiarization step, the highlighted themes by the reviewers were cross-referenced and core themes were selected. The broad categories were defined from our research questions and the themes emerged from reviewing the transcripts. Once the themes were selected and agreed upon by the reviewers, a table was made for each of the broad categories where the rows listed the selected themes, and the columns were labelled GIM and ED. Findings from the three GIM and two ED focus groups were compiled respectively, and differences and similarities between the GIM and ED groups were tabulated. Direct quotes from all transcripts in support of each theme were selected and assigned in corresponding cells of the tables. This organization also allowed for a more objective comparison of evidence gathered from the two groups of physicians. Lastly, interpretation of the framework matrix was done based on contributions of the entire research team through multiple revisions and impressions. Framework analysis was conducted manually. The most frequently recurring themes were reported as major themes listed in order of decreasing frequency in the tables.

Patient and public involvement

None. No patient data were collected for this study.

RESULTS

Baseline Characteristics

There was a total of 41 GIM (n=29) and ED (n=12) physicians participating in focus groups with 44% women participants (Table 1). The emerging themes from focus group interviews were organized in three major categories of 1. Organization factors that are perceived to drive burnout, 2. Organizational factors that reduce burnout by bringing joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout.

I. Organizational factors that are perceived to drive burnout

Issues in the work environment, relational issues between other physician colleagues and leaders, and workload were found common themes highlighted by both GIM and ED physicians. The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 2.

1. Interruptions and noise

Physicians found frequent interruptions while seeing patients or arranging care plans as a major challenge that affects their workflow as well as the quality of care they can provide to patients. Physicians working in hospitals experience frequent interruptions from needing to answer calls for tests, respond to or need to make requests to nursing or other physicians and trainee questions about patients. Additionally, occupational noise exposure is found to be highly disruptive. The internal ambient noises for example can be derived from crowded spaces, equipment and acoustics of the building.

2. Interdepartmental conflict

Frequent disputes and disagreements between different hospital services was another major contributing theme identified. Examples include disputes over which physician or admitting service would admit patients as most responsible physician or arguments about performing tests or consultations on patients. Physicians found the time and energy spent on resolving discrepancies in opinion on consultation and admission decisions to add extra unnecessary pressures to their roles.

3. Heavy workload and scheduling

Heavy workload, poor working hours and conflicting schedules constituted another major theme that was frequently noted by both GIM and ED physicians. Long and poorly scheduled working hours prevent physicians from attending to their personal lives and interests. GIM physician work schedules include unpredictable hours including during the weekends while ED physicians work in fixed shifts that include overnight shifts that may also occur on weekends. ED physician comment including pressures from needing to rapidly assess, manage and potentially discharge their case load during fixed time shifts.

4. Feeling undervalued

Feeling undervalued by leadership and other consulting services was a key factor that was suggested as a contributing factor to burnout. Physicians perceived that they were not being heard by leadership as issues that they faced were not addressed.

Other less prominent themes that were found to be reported by both GIM and ED physicians included: 1. Bureaucracy and inefficiencies, 2. Non-physician roles like order entry into the EMR or portering patients within the department, or changing bedsheets, 3. Moral distress from

not being able to address the social determinants of health for marginalized populations, 4. COVID-19 global pandemic, 5. Financial structures and remuneration where physicians are asked to perform work that is either underpaid or not paid such as administrative work. All emerging themes have been summarized in Figure 1., illustrating the factors that were common to both GIM and ED specialties as well as those that were unique to each. Appendix I includes a list of all associated quotes for each of the major and minor themes.

II. Organizational factors that reduce burnout by bringing joy and satisfaction at work

The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 3. Appendix II includes a list of all associated quotes for each of the major and minor themes.

1. Feeling valued

Both GIM and ED physicians reported that feeling valued by patients, colleagues, and leaders was a major factor bringing joy to work. Physicians reported having a sense of accomplishment and meaning through skilled patient care.

2. Having sufficient time to build rapport with patients

This theme was reported more frequently in GIM than in ED groups. Physicians found having enough time with patients to build a connection was a one of the satisfying aspects of their job.

3. Collegiality

This theme was reported more frequently in ED than in GIM groups. Physicians reported that supportive work environment and positive interactions with colleagues as major factors that bring joy to their role.

4. Doing physicians' work

Being able to focus on physicians' work such as patient examination, interacting with patients, as opposed feeling occupied by non-physician roles such as entering orders, note-taking, portering patients or making phone calls for testing as examples was another identified theme. This theme was reported by both GIM and ED groups. Physicians found the opportunity to focus on practicing what they trained for to be another satisfying aspect of their jobs.

III. Actionable interventions to reduce physicians' burnout

Physicians identified a number of solutions to address the identified themes that contribute to burnout. The 26 key interventions were recommended by ED and GIM physicians for each previously described theme are presented in Table 4. Please see Appendix III for a complete list of all suggested direct quotes.

DISCUSSION

Organizational factors are thought to underlie physician burnout especially within hospitals but there are little data identifying these specific issues especially in GIM. Our study identified four main themes among GIM and ED physicians that contributed to feelings of burnout including 1. Interruptions and noise, 2. Interdepartmental conflict, 3. Heavy workload and scheduling, and 4. Feeling undervalued. The factors that were considered protective were largely the inverse of these: 1. Feeling valued by leadership, 2. Having time to build rapport with patients, 3. Cultivating collegiality and 4. Doing physicians' work. Most organizational issues perceived by physicians were common to both groups. Physicians also identified multiple potential strategies to improve wellness.

The first objective was to identify organizational factors that are perceived to drive burnout in physicians. In-line with the systematic reviews and meta-analyses on physicians' perspective on burnout [23,22,11], we found organizational-level factors to contribute to physician burnout. Agarwal *et al.* have previously described high quantity of work, non-physician roles, and feeling undervalued by local institutions as contributing factors to burnout in primary care providers [31]. They particularly described the perception of being undervalued as being rooted in lack of boundaries in responsibilities, inadequate communication and collaboration with leadership, and insufficient acknowledgment of the challenges faced by primary care providers [31]. Heavy workload [3,5,32–38], difficult working conditions, lack of time [3,33,35,38,39] and the constant pressure to perform tasks quickly are the most commonly reported organizational contributors to burnout [11]. In a cross-sectional survey from practicing oncologists, 73% reported symptoms of burnout that was driven by working in a chaotic atmosphere, feeling unappreciated, poor control over

workload, and discomfort in discussing workplace stress with peers [40]. In our study however, themes of interruptions and noise as well as interdepartmental conflict emerged as major stressors in the workplace. This is likely because qualitative studies on physician burnout in hospital-based medicine and particularly GIM and ED specialties are less common, leaving such fixable problems unidentified and unaddressed. One of the major sources of interdepartmental conflict is the frequent disagreement between services and the pressure to admit patients while both sides are overwhelmed and are not well supported. Although practically this issue arises between individuals, it is the organizational structure and process that places physicians on opposite sides of conflicts. Lastly, the other aspect of the interruption and internal ambient noise complaint is rooted in the over-stimulating and chaotic environment in which hospital-based care providers practice in, an issue that may be less of an issue in primary care settings. With regards to sexism in the workplace, female GIM physicians reported experiencing microaggressions and intimidation from older male staff which directly contributed to their experience of burnout. Gender bias has also been reported previously as a major barrier to career satisfaction by female surgeons and recognized as a risk factor for burnout [7].

Secondly, when exploring protective factors, being rewarded and valued were emphasized by both groups equally. Previous research recognized primary care providers' feelings of being undervalued by local institutions and health care systems as a major contributor to burnout [31]. Another study also identified lack of recognition as a contributor to burnout amongst physicians in French hospitals [16]. Interestingly, having time to build rapport with patients and reducing interruptions were more frequently suggested as protective factors by GIM physicians compared to their ED colleagues. GIM physicians often discussed having time to connect with patients and

improving the quality of that time by reducing interruptions as factors that bring satisfaction to their jobs. Meaningful physician-patient relationships had previously been described as a protective factor against burnout in family physicians, including major themes of patient-centered care, continuity, effective care, trust, and purpose [18]. During the COVID-19 global pandemic, creating such meaningful relationships was further hindered by the widespread use of telehealth and reduced patient time [17]. However, most studies were focused on family physicians and to our knowledge, these pertinent protective factors have not been previously reported from hospital-based providers. On the other hand, the last two identified factors of cultivating staff collegiality and doing physicians' work were more heavily emphasized by ED physicians. They found positive interactions with the staff, interesting cases, and good medicine as key factors that bring joy and satisfaction to their otherwise demanding roles. The concept of collegiality, teamwork, and fostering community amongst physicians as an effective way to protect against burnout has also been reported previously [7,31,41,42]. Although at face value collegiality may appear to be an individual-level factor, evidence suggests that organizational modifications are most influential in cultivating a satisfying and joyful environment for physicians. A recent qualitative study of job and life satisfaction amongst ED physicians suggests that regardless of physicians' self-identification as introverted or extroverted personalities, those with better job satisfaction tended to be more socially connected [43]. Overall, although protective factors that bring joy and satisfaction to physicians are often overlapping, it is important to consider the speciality-specific factors and to strengthen protective factors that are intertwined with the nature of each speciality. Moreover, augmenting areas where physicians find value in their roles and incorporating their perspective in organizational-level decision makings are fundamental in building resiliency against burnout.

Few previous studies have sought the perspective of the practicing physicians on interventions to prevent burnout. Additionally, few institutions have employed a comprehensive approach to tackle physician burnout as an organizational priority [14] Lack of physician input into interventions to improve wellness may also underlie the lack of physician engagement in wellness interventions. Broad recommendations such as reducing and also compensating physicians for the time they spend documenting in the electronic medical record (EMR), expanding support staff, and increasing positivity and collegiality have been described to improve the well-being of health care providers [41]. Others suggested a cultural change from stigmatization and competitiveness to compassion and collaboration, starting from medical school training [44]. Primary care physicians also recommended solutions in another qualitative study around the general themes of fostering community amongst colleagues, advocating for reforms beyond institutions, promoting the primary care providers' voice, and recalibrating expectations and reimbursement levels [31]. In this study, we sought specific solutions from physicians, leading to a list of 26 actionable recommendations to be implemented (Table 4). As supported by the literature, we believe that direct discussions through similar repeated focus groups and ongoing facilitated peer support sessions [45] with input from physicians are fundamental to identifying contributors to burnout. To address the root causes at an institutional level, Shanafelt et al., proposed four fundamental components of promoting foundational programs, cultural transformation, rapid iterative experimentation, and sustainability [25,46]. Future studies should also integrate qualitative interview findings from physicians and operations leaders, and late career physicians, to comprehensively address the organizational factors driving burnout.

Although several informative themes have emerged from this study, our findings are not without limitations. One of the limitations is that while our study provided rich information on organizational factors in the ED and GIM at two urban tertiary care academic hospitals, our findings may not be generalized to hospitals, departments or health care models or specialities different from those under study as organizational issues may reflect local environments, available resources, and the patient populations. However, it is likely that the highlighted issues are common and would resonate with other groups and urban hospitals. Secondly, given the qualitative nature of the study, it is challenging to assign value to each of the themes identified from focus groups or individuals within each group. Even though most themes were selected because they were more frequently mentioned, it is unclear which organizational factor contributes the most to burnout and ultimately, which intervention would be most effective in reducing burnout. Thirdly, physician leaders were excluded from participating in the focus groups in order to provide a safe space for discussing organization issues. However, it should be noted that leaders may have additional perspectives on organizational issues [47]. There are also demographic limitations that should be considered including the relatively small sample size, discrepancies in the number of participants in each of the groups, and the fact that the majority of the participants were younger than 50 years old. Lastly, although the vast majority of challenges reported in the focus groups appeared to precede the global pandemic, it must be noted that the interviews were conducted during the pandemic. Nonetheless, identifying contributing factors to burnout during or prior to the pandemic are crucial and physician burnout is likely an overlooked issue that was particularly brought to attention during the COVID-19 pandemic.

CONCLUSION

Organizational issues that contribute to high rates of burnout in frontline physicians in hospitals include interruptions and noise, interdepartmental conflict, heavy workload, and feeling undervalued by leadership. Most of these contributing factors to burnout are resolvable, many of which can be addressed at low cost. Achieving wellness for health care providers must be a priority focus for health care systems, and organizational change is an important path to improving wellness.

ETHICS STATEMENT: This study was approved by the Providence Health Research Ethics boards H018-02999.

FUNDING: Medical Staff Association at Providence Health Care.

CONFLICTS OF INTEREST: There are no competing interests for any author.

AUTHOR CONTRIBUTIONS: NAK, AP, PD, HL, DL, ES, AS contributed to the design of the study. NAK, ES, DR, ER, VV, KR, AS, AP, AT and DL contributed to data collection and FG, ES and NAK contributed towards analysis. All authors contributed to interpretation of the results, and meaningful contribution to writing and accepting the final manuscript. NAK had full access to all the data in the study and is responsible for the overall content as guarantor.

DATA STATEMENT: Statistical code and dataset available upon request of the corresponding author.

REFERENCES

1. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113. doi:10.1002/JOB.4030020205

2. Kurzthaler I, Kemmler G, Holzner B, Hofer A. Physician's Burnout and the COVID-19 Pandemic—A Nationwide Cross-Sectional Study in Austria. *Front Psychiatry*. 2021;12:784131. doi:10.3389/FPSYT.2021.784131/FULL

3. Hasbrouck MA, Waddimba AC. The work-related stressors and coping strategies of group-employed rural health care practitioners: A qualitative study. *Am J Ind Med*. 2017;60(10):867-878. doi:10.1002/ajim.22753

4. Trockel M, Bohman B, Lesure E, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018;42(1):11-24. doi:10.1007/s40596-017-0849-3

5. Franz CE, Barker JC, Kim K, et al. When help becomes a hindrance: Mental health referral systems as barriers to care for primary care physicians treating patients with Alzheimer's disease. *Am J Geriatr Psychiatry Off J Am Assoc Geriatr Psychiatry*. 2010;18(7):576-585.

6. Prentice S, Elliott T, Dorstyn D, Benson J. Burnout, wellbeing and how they relate: A qualitative study in general practice trainees. *Med Educ*. 2023;57(3):243-255. doi:10.1111/MEDU.14931

7. Lu PW, Columbus AB, Fields AC, Melnitchouk N, Cho NL. Gender Differences in Surgeon Burnout and Barriers to Career Satisfaction: A Qualitative Exploration. *J Surg Res*. 2020;247:28-33. doi:10.1016/J.JSS.2019.10.045

8. Khan N, Palepu A, Dodek P, et al. Cross-sectional survey on physician burnout during the COVID-19 pandemic in Vancouver, Canada: the role of gender, ethnicity and sexual orientation. *BMJ Open*. 2021;11(5):e050380. doi:10.1136/BMJOPEN-2021-050380

9. Li K, Frumkin A, Bi WG, Magrill J, Newton C. Biopsy of Canada's family physician shortage. *Fam Med Community Health*. 2023;11(2):e002236. doi:10.1136/fmch-2023-002236

10. Physician wellness: New 2021 National Physician Health Survey findings — burnout, short-staffing and an overburdened system take their toll. Canadian Medical Association. Accessed November 25, 2023. https://www.cma.ca/physician-wellness-hub/content/physician-wellness-new-2021-national-physician-health-survey

11. Sibeoni J, Bellon-Champel L, Mousty A, Manolios E, Verneuil L, Revah-Levy A. Physicians' Perspectives About Burnout: a Systematic Review and Metasynthesis. *J Gen Intern Med*. 2019;34(8):1578-1590. doi:10.1007/s11606-019-05062-y

12. Fox KE, Johnson ST, Berkman LF, et al. Organisational- and group-level workplace interventions and their effect on multiple domains of worker well-being: A systematic review. *Work Stress*. 2022;36(1):30-59. doi:10.1080/02678373.2021.1969476

13. Cohen C, Pignata S, Bezak E, Tie M, Childs J. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ Open*. 2023;13(6):e071203. doi:10.1136/bmjopen-2022-071203

14. Longo BA, Schmaltz SP, Williams SC, Shanafelt TD, Sinsky CA, Baker DW. Clinician Well-Being Assessment and Interventions in Joint Commission-Accredited Hospitals and Federally Qualified Health Centers. *Jt Comm J Qual Patient Saf*. 2023;49(10):511-520. doi:10.1016/j.jcjq.2023.04.007

15. Ghaseminejad F, Rich KE, Rosenbaum D, et al. Differences in Physician Burnout by Specialty: A Cross-Sectional Survey. *Perm J*. 2024;28(3):58-68. doi:10.7812/TPP/24.040

16. Sibeoni J, Bellon-Champel L, Verneuil L, Siaugues C, Revah-Levy A, Farges O. Workplace environment around physicians' burnout: A qualitative study in French hospitals. *Scand J Work Environ Health*. 2021;47(7):521. doi:10.5271/SJWEH.3977

17. LeSage C. Physician Burnout and the COVID-19 Pandemic: An Analysis of U.S. Primary Care Physicians. *Honors Theses*. Published online June 1, 2022. Accessed May 19, 2023. https://digitalworks.union.edu/theses/2580

18. Hiefner AR, Constable P, Ross K, Sepdham D, Ventimiglia JB. Protecting Family Physicians from Burnout: Meaningful Patient-Physician Relationships Are "More than Just Medicine." *J Am Board Fam Med JABFM*. 2022;35(4):716-723. doi:10.3122/JABFM.2022.04.210441

19. EBSCOhost | 151054114 | Using Framework Analysis in Applied Qualitative Research. Accessed November 25, 2023.

20. Kiernan MD, Hill M. Framework analysis: a whole paradigm approach. *Qual Res J*. 2018;18(3):248-261. doi:10.1108/QRJ-D-17-00008

21. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-357. doi:10.1093/intqhc/mzm042

22. Panagioti M, Panagopoulou E, Bower P, et al. Controlled Interventions to Reduce Burnout in Physicians: A Systematic Review and Meta-analysis. *JAMA Intern Med*. 2017;177(2):195-205. doi:10.1001/jamainternmed.2016.7674

23. Cp W, Ln D, Pj E, Td S. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *Lancet Lond Engl*. 2016;388(10057). doi:10.1016/S0140-6736(16)31279-X

24. Improvement Area: Workforce Well-Being and Joy in Work | Institute for Healthcare Improvement. Accessed October 11, 2024. https://www.ihi.org/improvement-areas/improvement-area-workforce-well-being-and-joy-work

25. Shanafelt TD, Noseworthy JH. Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout. *Mayo Clin Proc*. 2017;92(1):129-146. doi:10.1016/j.mayocp.2016.10.004

26. Ritchie J, Lewis J, Lewis P of SPJ, Nicholls CM, Ormston R. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE; 2013.

27. Goldsmith L. Using Framework Analysis in Applied Qualitative Research. *Qual Rep*. Published online June 20, 2021. doi:10.46743/2160-3715/2021.5011

28. Hackett A, Strickland K. Using the framework approach to analyse qualitative data: a worked example. *Nurse Res*. 2019;26(2):8-13. doi:10.7748/nr.2018.e1580

29. Parkinson S, Eatough V, Holmes J, Stapley E, Midgley N. Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qual Res Psychol*. 2016;13(2):109-129. doi:10.1080/14780887.2015.1119228

30. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13(1):117. doi:10.1186/1471-2288-13-117

31. Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional Dissonance and Burnout in Primary Care: A Qualitative Study. *JAMA Intern Med*. 2020;180(3):395-401. doi:10.1001/JAMAINTERNMED.2019.6326

32. Sibeoni J, Orri M, Valentin M, et al. Metasynthesis of the Views about Treatment of Anorexia Nervosa in Adolescents: Perspectives of Adolescents, Parents, and Professionals. *PLoS ONE*. 2017;12(1):e0169493. doi:10.1371/journal.pone.0169493

33. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of qualitative literature: Lessons learnt. *BMC Med Res Methodol*. 2008;8:21. doi:10.1186/1471-2288-8-21

34. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol*. 2012;12:181. doi:10.1186/1471-2288-12-181

35. Chenail RJ. Learning to Appraise the Quality of Qualitative Research Articles: A Contextualized Learning Object for Constructing Knowledge. *Qual Rep*. 2011;16(1):236-248.

36. Petek D, Gajsek T, Petek Ster M. Work-family balance by women GP specialist trainees in Slovenia: a qualitative study. *BMC Med Educ*. 2016;16:31. doi:10.1186/s12909-016-0551-2

37. Beng TS, Chin LE, Guan NC, et al. The experiences of stress of palliative care providers in Malaysia: a thematic analysis. *Am J Hosp Palliat Care*. 2015;32(1):15-28. doi:10.1177/1049909113503395

38. Çiçeklioğlu M, Öcek ZA, Turk M, Taner Ş. The influence of a market-oriented primary care reform on family physicians' working conditions: A qualitative study in Turkey. *Eur J Gen Pract*. 2015;21(2):97-102. doi:10.3109/13814788.2014.966075

39. McGowan Y, Humphries N, Burke H, Conry M, Morgan K. Through doctors' eyes: a qualitative study of hospital doctor perspectives on their working conditions. *Br J Health Psychol*. 2013;18(4):874-891. doi:10.1111/bjhp.12037

40. Singh S, Farrelly A, Chan C, et al. Prevalence and Workplace Drivers of Burnout in Cancer Care Physicians in Ontario, Canada. *JCO Oncol Pract*. 2022;18(1):e60-e71. doi:10.1200/OP.21.00170

41. Dillon EC, Tai-Seale M, Meehan A, et al. Frontline Perspectives on Physician Burnout and Strategies to Improve Well-Being: Interviews with Physicians and Health System Leaders. *J Gen Intern Med*. 2020;35(1):261-267. doi:10.1007/S11606-019-05381-0/TABLES/2

42. Makowski MS, Trockel M, Paganoni S, et al. Occupational Characteristics Associated With Professional Fulfillment and Burnout Among US Physiatrists. *Am J Phys Med Rehabil*. 2023;102(5):379-388. doi:10.1097/PHM.0000000000002216

43. Kase J, Doolittle B. Job and life satisfaction among emergency physicians: A qualitative study. *PLOS ONE*. 2023;18(2):e0279425. doi:10.1371/JOURNAL.PONE.0279425

44. Walsh G, Hayes B, Freeney Y, McArdle S. Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors. *BMJ Open*. 2019;9(9):e030209. doi:10.1136/BMJOPEN-2019-030209

45. Schwartz R, Shanafelt TD, Gimmler C, Osterberg L. Developing institutional infrastructure for physician wellness: qualitative Insights from VA physicians. *BMC Health Serv Res*. 2020;20(1):7. doi:10.1186/s12913-019-4783-9

46. Shanafelt T, Stolz S, Springer J, Murphy D, Bohman B, Trockel M. A Blueprint for Organizational Strategies To Promote the Well-being of Health Care Professionals. *NEJM Catal*. 2020;1(6). doi:10.1056/CAT.20.0266

47. Mitton C, Peacock S, Storch J, Smith N, Cornelissen E. Moral distress among health system managers: exploratory research in two British Columbia health authorities. *Health Care Anal HCA J Health Philos Policy*. 2011;19(2):107-121. doi:10.1007/s10728-010-0145-9

Table 1. Focus group participants demographics

Demographic	GIM Hospital 1 (n=16)	GIM Hospital 2 (n=13)	ED FG1 Hospital 1 (n=12)
Age years			
35-49	15	12	8
>50	1	1	4
Sex			
Woman	6	6	6
Man	10	7	6

Table 2. Major emerging themes and associated key quotes for organizational factors that drive burnout.

Major Theme	Key Quotes
1. Interruptions and noise	• Ex 1. *"The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value."* (GIM) • Ex 2. "*The other thing that has been a real pebble in my shoe lately is […] in terms of electronic devices and telephones in the hospital […]. In the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and here in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time, watching videos without headphones. And it's very disruptive."* (ED)
2. Interdepartmental conflict	• Ex 1. *"You are fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner."* (GIM) • Ex 2. *"One area that I still fear, and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because in internal medicine, we have such a broad mandate"* (GIM) • Ex 3. "*I know the person that just checked in with an eye problem at 11pm, they might get seen at 10 in the morning… it is so discouraging to go into there."* (ED)
3. Heavy workload and scheduling	• Ex 1. "*I think weekends are some of the worst times for faculty… We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team… and then you're often on call that night, then have to be back the next morning. So, I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week."* (GIM) • Ex 2. *"There's no such thing as a daycare that opens up at 7:00 [which] rules out a lot of dual physician family and or people with a kid in daycare and a partner… it makes life extremely more difficult. When really, we don't need to be there at 7:30 for patient care."* (GIM) • Ex 3. *"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly"* (ED)

4. Feeling undervalued	• Ex 1. *"Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes… on top of that you have to care for and role model for residents and medical students… and I don't think it's valued or recognized by the organization."* (GIM) • Ex 2. *"I do think our time isn't always valued by some of the consultants."* (ED)

Table 3. Major emerging themes and associated key quotes for organizational factors that reduce burnout by bringing joy and satisfaction at work

Major Theme	Key Quotes
1. Feeling valued	• Ex 1. *"[knowing that] you're a valued member of the organization, that if you if you left, you would be missed… [and] you're rewarded for bringing value to the organization"* (ED) • Ex 2. *"It's good to feel like you could make a difference in a patient population… [and] when my skill sets are valued."* (GIM)
2. Having sufficient time to build rapport with patients	• Ex. 1. *"The sense of connection that I had to the patient and the gratitude that this patient expressed [was what I found] satisfying."* (GIM) • Ex. 2. *"Having a patient actually know who I am and remember who I was, it was just incredible."* (GIM)
3. Collegiality	• Ex 1. *"Just the interaction I got with all the staff and the collegiality… everyone is friendly, smiling, and helpful."* (ED) • Ex. 2. *"Colleagues that you can trust and turn to bounce things off of".* (ED)
4. Doing physicians' work	• Ex. 1. *"When someone's sick… [doing] something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day."* (ED) • Ex 2. *"Sense of getting to use my skills and training to help this person"* (GIM)

Table 4. All 26 key actionable interventions suggested by GIM and ED physicians to reduce burnout, listed in correspondence to the emerging themes.

Theme	Suggested intervention
Interruptions and noise	1. *"We need to alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office or at the dermatologists."* (ED)
Heavy workload and scheduling	2. *"A communication app, where individuals would sign-in to their role in the hospital every given day"* (GIM) 3. *"Having a hospitalist to help with the load"* (GIM) 4. *"A way to redirect phone calls so that they're batched or prioritized."* (GIM) 5. *"Flexibility in scheduling… having locums to take unwanted call shifts/weekends"* (GIM) 6. *"Post-call days or wellness days"* (GIM) 7. *"Rather than us calling five different [people] there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low-lying fruit that is contributing to our burnout, for sure."* (ED)
Interdepartmental conflict	8. *"Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them […] like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay."* (GIM) 9. *"Cultural change within surgical services […] more buy in from higher ups in terms of surgical services, like accepting the actual surgical issues […] it would be nice for the surgical services to take ownership of their patient."* (GIM) 10. *"Defining boundaries of our specialty (i.e., admission criteria)"* (GIM) 11. *"Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care."* (GIM) 12. *"Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER."* (GIM) 13. *"Culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."* (ED)

Bureaucracy and inefficiencies	14. *"More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders."* (GIM) 15. *"Reducing the amount of administration with order entry with Cerner."* (GIM)
Non-physician roles	16. *"Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker, housecleaners, porters)"* (GIM and ED) 17. *"Have a chronic clinical associate or like nurse practitioner on each team."* (GIM) 18. *"Workforce planning and hiring enough people for the future."* (GIM) 19. *"Have people ED to help [patients] fill out the paperwork for housing, get them better clothes, get them better food."* (ED) 20. *"A social/behavioural ICU"* (ED)
Patient Experience in the Waiting room	21. *"Having a quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."* (GIM) 22. *"Waiting room better staffed, maybe with someone who's looking after these patients, watching out for, you know, signs of people escalating, people becoming more violent."* (ED)
Financial structures and remuneration	23. *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied… So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load."* (GIM) 24. *"Improving remuneration to attract fellows to live/work in Vancouver."* (GIM)
Violence against physicians	25. *"Physical barriers to actually protect [physicians]."* (ED) 26. *"Offsite opiate overdose [and] sobering units"* (ED)

Figure legend

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

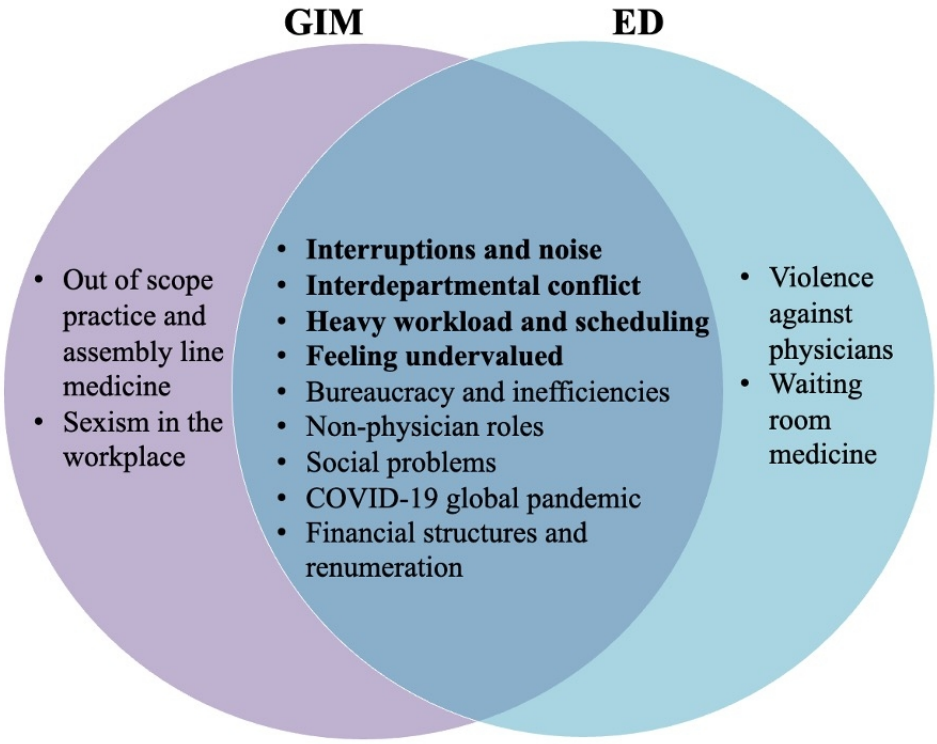

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

165x127mm (144 x 144 DPI)

APPENDIX I

Category I: Contributing Factors to Burnout

Theme	GIM	ED
Feeling undervalued	- "Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes." - "Our time and our efforts are less valuable than other doctors in the hospital." - "On top of that you have to care for and role model for residents and medical students…and I don't think it's valued or recognized by the organization." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore."	- *"I do think our time isn't always valued by some of the consultants."
Workload and scheduling	- "Relationship building with the patient and really showing them that we care about them seems to disappear and the exhaustion of the workload and day to day things that I'm now responsible for… the whole process has become very distant and almost impersonal." - "I could work the same number of hours on a different rotation, and I could function I can even have like, personal life after hours. care for my kids but the CTU I can't."	"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly."

	- "One is all the calling and the figuring out about scheduling for patients, when they're going to have their scope, when they're going to have their surgery when a surgical service is going to see them, can I get in touch with a surgical service?" - "The sheer number of patients" - "Holding the front and making sure nobody dies until the next day without really having much time to think about the active issues or if an interesting case has been admitted." - "Hard to establish that that relationship, but at the same time, you're trying to get them out of hospital as soon as you can, when a lot of them don't want to." - "There's no such thing as a daycare that opens up at seven. And so you basically, rules out a lot of dual physician family and or people as a kid in daycare and a partner like it makes life extremely more difficult. When really we don't need to be there at 730 for patient care." - *"When you think about your job, as a teacher, your job as a physician, and then also you're kind of having to always engage with the emergency department and deal with what's coming, coming in to see to you, it's almost like you've got three jobs that you're trying to do. And then given the complexity, the social complexity of the patients that you're that you're working with…"	

	- "Sometimes when you're just too busy, I find sometimes like, I don't really get that fulfilment from patient interactions, like, it's nice to have that time to, like, be present and, you know, get something personally out of that interaction as well." - "I think coming back to our structure and function on the CTU, I think weekends are some of the worst times for faculty. We're here on the weekends, we are expected to round on the weekends when we're there. We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team. So I think weekends are pretty brutal. And then you're often on call that night, then have to be back the next morning. So I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right." - "I think it's interesting how it's pretty consistent all across the board whether or not you know,	

	we're single, or have a partner or have a dog or kids, I think everybody's life is on hold. I think it affects people differently. I have three kids. And, yeah, and my husband's also in medicine. So it's very, very chaotic. And when I'm on service, I feel like, I feel like, I take a deep breath and go under water for like two weeks, and then come out the other end and mess up everything, many times. dinners, games, extracurriculars for the kids all the weekend stuff, family stuff, it's tough, it's really tough. I had to do less call, I have to give away as much of it as possible or take on less weekend work. " - "Just want to emphasize that phrase that life gets put on hold when you're on service. Because that's, I think, is a very abnormal way of working. You know, everybody else has, you know, a balance where they work and they have their life… like I don't answer my emails, I don't clean my home, I like don't eat well, I don't exercise. And then I try and make up for it on my like week off, which, again, it's not, it's not necessarily the best way to live." - "And that's partially due to agency and lack of control over what we do and do not do. But if you can't take a minute to think through things really thoughtfully. We're internist, we like to think so that's a big part of what we do, or I think wellness, for me."	

Out of scope practice and assembly line medicine	- "We're asked to look after patients that are sort of outside of the range of expertise that we were actually trained in (i.e., trauma patients)." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex." - "I have lots of institutional pressure that's coming at me to move people through and be efficient." - "You kind of get reduced to like a mechanical check, check, check. And on to the next one, like, I find, I really don't get that fulfilment, from, you know, the interaction as much as it should be anyways."	
Interruptions and noise	- "I get woken up, and I have to like deal with some, you know, something like that we're fighting back or disposition issue, like, I can't go back to sleep for a while." - "The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value." - "The Emerg doc at the 11th takes five minutes to interrupt my review with the patients who present this patient, the residents which you know, whatever, but then we say, well, this patient would be	- "An overhead paging system that really sometimes just interrupts you so many times that it interrupts your train of thought." - "The other thing that has been a real pebble in my shoe lately is the fact that in terms of electronic devices and telephones in the hospital, yes, I find where you know, in the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and hear in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time watching

	more appropriate with psychiatry." - "So it's not like you're always standing at a computer where you can enter an order. So you can't you're interrupted, to put in something instead of just saying, Can you give them whatever? And then saying yes, no problem. You have to then interrupt whatever you're doing, go find a computer and do it before you forget, because it's one of 1000 interruptions that has happened in that last hour." - *"It's very frustrating having to deal with all the noise issue..." - "I think one of the strongest visceral reactions I have is when I am distracted in the middle of doing something that I think is important like reviewing it case with a resident or learner. And we're sort of deep in thought and we're having a good time kind of discussing some of the interesting aspects of a case. And then to be pulled away from that by a phone call, or, you know, a nurse coming by and, and just demanding kind of your attention, when you really were kind of in a flow state. And it's hard to have a sustained flow state in the hospital setting, I get it, it's an acute place. But I certainly think there are better ways of managing the distractions and triaging the distractions so that it's not all the time always."	videos without headphones. And it's very disruptive." - "When you dictate and somebody else dictates next to you, they will dictate into your system. So you actually have to like because it's so loud." - "Definitely feeling pressed for time in a number of different ways. One because of the constant interruptions…"
Bureaucracy and inefficiencies	- "Battling the bureaucracy, so to speak, bushwhacking through	- "Some of the technical issues, like having to log in to

	the bureaucracy just to get basic patient care completed."	different systems, I guess you have to log into Paris separately from logging into Cerner." - Dictaphones breaking - Cerner freezing - Broken equipment
Interdepartmental conflict	- *"It's very frustrating having to deal with … the politics and fighting with different services." - "Talking to eight different surgeons to find out somebody who's willing to look after this patient." - "It's hard for me to understand why the opinion of every other consultant in the hospital is more important than my opinion as an internist." - "You're fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner." - "One area that I still fear and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because internal medicine, we have such a broad mandate, there's almost nothing we can't manage short of cutting someone open. Right? Many of these cases, we don't offer much. And the fact that everyone else has the ability to refuse a case and we don't, we are then expected to see the case. This is particularly made worse when	- *"I do think our time isn't always valued by some of the consultants." - "One of the things would be the fact that for a lot of our consultants, the day ends at about 430. And everything, held overnight, which means, you know, we're managing complex elderly patients." - "But I know the person that just checked in with an eye problem at 11pm. They might get seen at 10 in the morning, like literally, he says it is so discouraging to go into there.

	our trainees are facing really heavy loads in the emergency department." - "It takes up so much more of your time to try and deflect a consult and a fight back and to push against the system, that the path of least resistance is often just doing the work and admitting the patient. And you have to decide in that moment, are you going to engage? Or are you not going to engage?" - "I always ask what is the best thing for the patient, right? But at the same time, you don't want to reward the system for handing us crap, right? And so I feel that real problem, that tension and like I said, most times I tell the team just take it because I still think we in the end probably are the best person, but it still feels like we've been abused a little bit, right?" - "You know, one of the big issues that the hospital has dealt with, and our department in particular has dealt with for quite a few number of years, is this pay for performance of the emergency department, which basically forces the department to push patients towards any admitting service. And since internal medicine is the greatest service in the world, that can take care of everyone, we are usually the default when no other service is willing to take patients, because they are either too complex or too sick, or, you know, they are too multi system, or, you know, they're too young. There's been	

	instances where patients are not adequately evaluated, or worked up and then just deflected or deferred to Internal Medicine Service to do their job, because they feel the pressure to push them along, because they get paid more, you know, that that department makes more money for their activities. So it's a way and it doesn't benefit us in any way, except just adds to our stress - "Like the number of times where I've just been pushed to admit somebody that I'm not done assessing or just maybe needs a few hours in the ER and could avoid being admitted, is incredible. And that it just it defeats logic. Sometimes, it's just simply like, 'Get out of my Emerg I don't care if the patient only needs two more hours.' You know. it's actually really an important part of something small, that could be fixed that would add a lot of positivity to our quality of life"	
Social problems	- "I think part of the problem is that people don't have to be as accountable with some of our individuals who cannot advocate for themselves." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex."	- "Sometimes people come in, because they're hungry, or because they want a cheese sandwich or a blanket or something. And even though I know they need that, for me, it doesn't give me a sense of satisfaction at the end of the day, as opposed to having someone who's medically ill."
Non-physician roles	- "We need to move patients, we need to make room, we need to	- "I'm constantly coming up against logistical barriers, like

	have ways to discharge people. And so that's what makes it like a s to me, because I'm just the manager, you know, I'm, I'm not practicing medicine at that point." - "… you're also kind of playing social worker at the same time."	I can't find the patient, I have to change the bed myself. There's no nurse to help." - "Portering, changing sheets, cleaning up garbage. Other things I've heard are things like doing nursing assessments, because there's maybe not enough time, even for the nurse to do an assessment." - "Having to run around and find the patient, changing your own sheets cleaning up through, you know, cleaning up the bay or the room for the patient." - "Having to bring them into a stretcher that is messily made by me with garbage on the floor that I've tried to clean up but haven't had time to clean up completely." - *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."
Violence Risk		- "I have seen a bit more agitated patients that are placing staff at risk - like we're just held to the standards, it's versus we don't have a system in place to make us feel safe to assess that patient." - "Biggest thing that is not working is our approach to violence in the emergency department."
Waiting room medicine		- "We do have a problem with the triage and because we don't have enough physical

		space to put patients into beds, so sometimes the triage is quite questionable. So for example, suicidal patients put in the waiting room." - "a care space that is not appropriate for their illness, and then have to ask them to go back to a waiting room full of people who are maybe intoxicated or experiencing other illnesses and maybe not an appropriate space for them." - "There's literally not a single space where you can assess a patient. So it's like, how are we supposed to be to our job if we don't have spaces to assess patients" - "Patients have no privacy. There's nowhere to examine them. There's nowhere to address them."
COVID-19 pandemic effect	- "And I'm hearing like, we may be asked to even offer more because we were able to take COVID like a champ. That worries me… like we could burn out and we can become more and more inclusive of what we're doing and not have our boundaries and not be a specialty anymore. So as we do restructuring, as we talk about our capacity to take care of our patients, we also have to talk about our, our skill set, what our, what our boundaries are. "	- "We in the emergency have piled on risk upon us, like we are facing more risk than we did in the past. And I just, that became very obvious to me in the pandemic."
Sexism in the workplace	- "This may not be a very popular thing to say. But I think sexism does still exist to in the workplace... But as a woman, I think there are	

	potentially more opportunities to get frustrated because of the way you might be treated, or the nurses not respecting your authority as much as your white male colleague, for example, or pushback you get on the phone. So I think that might also play into kind of wearing down faster." - "Ya, like [they] said, I definitely see a difference in the workplace in the way my female colleagues are treated than how I'm treated from other physicians. Definitely from nursing staff and allied health. And so I think that that It has to contribute to how people end up experiencing burnout." - "I would also echo that there's a lot of intimidation from surgeons, male, older, towards female physicians. And it might not be very, it's not like very discreet necessarily. It's just, it's kind of like microaggressions. And, yeah, it's definitely there."	
Financial structures and remuneration	- "And so that struggle between how much should we make for the work versus how much work is reasonable for us to do at once? I think is really is really tough… But I think that that tension is really hard to get away from. And, and it always feels like oh, if I just see one more, or if I stay a little bit longer tonight than I can make a bit more of it. But a lot of that doesn't lead to good care and doesn't lead to us feeling healthy."	- *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."

	- *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right."	
Lack of camaraderie for difficult cases	- *"I talked about this, the council of the elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really	-

	well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX II

Category II: Protective Factors that Bring Joy and Satisfaction to Physicians

Theme	GIM	ED
Being rewarded and valued	- "It's good to feel like you could make a difference in a patient population." - "When my skill sets are valued."	- "You're a valued member of the organization, that if you if you left, you would be missed." - "You're rewarded for bringing value to the organization."
Having time to build rapport with patients	- "To connect with the person, and they felt they felt sort of heard in the end, we were able to sort of events, events, things, and it was that connection with the patient that, that I found sort of satisfying." - "The sense of connection that I had to the patient and the gratitude that this patient expressed." - "And having a patient actually know who I am and remember who I was, it was just incredible."	- "Positive interactions with the patients'
Reducing interruptions	- "Having time to interact with patients without being interrupted."	
Staff collegiality	- "I love my colleagues"	- "Positive interactions with the staff" - "Such wonderful colleagues everywhere. Like, literally everyone is friendly, smiling, and helpful." - "Just the interaction I got with all the staff and the collegiality." - "Colleagues that you can trust and turn to bounce things off"

Doing physicians' work	- "Sense of getting to use my skills and training to help this person"	- "When someone's sick, might actually do something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day." - "Interesting cases and good medicine, as well as, as well as patient satisfaction, but and, you know, and good outcomes."

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX III

Category III: Actionable Interventions to Reduce Burnout.

Theme	GIM	ED
Workload and scheduling	- "Communication app, basically where individuals would sign in to their role in the hospital every given day" - "Having a hospitalist to help with the load." - *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized." - Flexibility in scheduling (having locums to take unwanted call shifts/weekends) - "post-call" days or wellness days	- "Rather than us calling five different there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low lying fruit that is contributing to our burnout, for sure."
Interruptions and noise	- *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized."	- "I think we need to, you know, alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office at the dermatologists."
Bureaucracy and inefficiencies	- "More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders." - "Reducing like the amount of administration with order entry with Cerner."	

Interdepartmental conflict	- "Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them. So something like might look like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay." - "Cultural change within surgical services." - "More buy in from higher ups in terms of surgical services, like accepting the actual surgical issues, because I've taken care of many surgical issues on CTU, even post op, they come back to CTU. Like it would be nice for the surgical services to take ownership of their patient." - Defining boundaries of our specialty (ie. Admission criteria) - Interdepartmental relationships: Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care. - Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER (the participant cited that this exists at the Mayo clinic).	- "It'd be nice to the culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."

Social problems		- "A social/behavioral ICU" - "Improved social support person."
Non-physician roles	- "Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker)" - "It would be nice to have like a chronic clinical associate or like nurse practitioner on each team." - Workforce planning and hiring enough people for the future.	- "Can we get more cleaners? Could we get more porters, that kind of thing." - "Trying to get us another staff member. to rise to get patients to where you can examine them and have them ready for examination and helping you get what you need to get that patient through so that you're not doing as many non-clinical tasks. -- an LPN is probably the most ideal." - "More housecleaners" - "Have people emerge and help them fill out the paperwork for housing, get them better clothes… get them better food than the sandwiches and things are not made with real food."
Violence Risk		- "Physical barriers to actually protect." - "Offsite opiate overdose unit" - "Offsite sobering units"
Waiting room medicine	- "Having quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."	- "Waiting room better staffed, maybe with someone who's like looking after these patients like watching out for, you know, signs of people escalating, people becoming more violent."
Financial structures and remuneration	- *"Recently on CTU (clinical teaching unit), we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time	

	to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - "So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load. Because really what strikes us as the most stress is when we're dealing with a lot of sick patients, a lot of training needs, and we don't have enough time. " - Improving remuneration to attract fellows to live/work in Vancouver. - Consider moving away from FFS (fee for service) and adopting AFP (alternate funding plan), or a mixed model. - Pay for time and quality, not clinical load	
Lack of camaraderie for discussing difficult cases	- Attending monthly rounds to discuss difficult cases or to just check in => *"I talked about this, the council of the	

	elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX IV

Semi-Structured Focus Group Questions

Preamble for participants:

Thank you for taking the time to participate in this focus group. I would like to first explain how this focus group will take place. My name is XXX and I am a XXX doing a research study on system-level sources of workplace burnout.

We recently conducted a survey on burnout in the Department of Medicine and identified several important things. First, the majority of physicians are experiencing burnout right now. Second, almost 40% of physicians struggle with work-life conflict. And third, members rated reducing work inefficiencies and non-physician clerical work as *the most important* strategies to reducing burnout.

So, the purpose of this focus group is to try to identify those aspects of work including the work inefficiencies and the non-clerical work that contribute to burnout in your {division/department}. We would like to understand your thoughts on what are the system level factors that are challenging and that cause burnout feelings for you and others in your group and what are your thoughts on the potential solutions to these system level factors.

Our discussion should take about 60-90 minutes. With your approval, this session will be audio-recorded and notes will be taken during the session by a facilitator, for analysis later. No personal identifiers will be linked to the recording or the notes—only a code, which is known only to the research coordinator. We may use direct quotes of things you say in the focus group in reports of research findings. If your quotes are used, your name will not be linked to them, nor will any information that would identify any person. We would also like to remind all participants that the information shared today should be treated as confidential and not shared outside of this room.

Please feel free to answer our questions based on your ideas about this topic, or by thinking of examples from your own experiences, or those of your colleagues. There are no right or wrong answers.

Semi-structured focus group questions:

What matters most to physicians at work

1. Before we start talking about the sources of burnout, we want to understand, what matters to you at work? What brings job satisfaction? What creates pride in the organization? What does it look like when we're at our best?

Organizational/work based sources of burnout

2. What are the specific frustrations, impediments or things at work that get in the way of attaining what matters most to you at work.

Probe: What are the pebbles in your shoes? The processes, issues or circumstances that, if we could only deal with them, it would make it so much easier for you to do what you really want to do when you practice medicine.

Probe: What are the frustrations or impediments at work that get in the way of your work life balance?

Organizational/work based Solutions to Burnout

3. Thinking to the pebbles in your shoes, what are some strategies that would help you get to what matters most to you when taking care of patients?

Probe: What are some strategies that would help you achieve better work life balance?

Probe: What could division heads, department heads and hospital leadership do?

BMJ Open

Organizational factors associated with burnout amongst emergency and internal medicine physicians: A qualitative study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2024-085973.R2
Article Type:	Original research
Date Submitted by the Author:	25-Nov-2024
Complete List of Authors:	Ghaseminejad, Farhad; The University of British Columbia Rich, Kira; University of British Columbia, Department of Emergency Medicine Rosenbaum, Debbie; The University of British Columbia, Medicine Rydz, Emilia; University of British Columbia, Department of Emergency Medicine Chow, Lawrence; University of British Columbia, Department of Medicine Salmon, Amy; University of British Columbia Palepu , Anita; University of British Columbia, Department of Medicine; University of British Columbia Dodek, Peter; University of British Columbia; University of British Columbia, Department of Medicine Leitch, Heather A.; University of British Columbia, Department of Medicine Townson, Andrea; University of British Columbia, Department of Medicine Lacaille, Diane; University of British Columbia, Department of Medicine Varshney, Vishal; University of British Columbia, Department of Anesthesiology Pharmacology and Therapeutics Stanger, Elizabeth; Providence Health Authority Khan, Nadia; University of British Columbia; University of British Columbia, Department of Medicine
Primary Subject Heading:	Health services research
Secondary Subject Heading:	Health policy
Keywords:	Burnout, Professional, Physicians, Burnout

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Organizational factors associated with burnout amongst emergency and internal medicine physicians: A qualitative study

Farhad Ghaseminejad MSc[1], Kira E. Rich MD[2], Debbie Rosenbaum MD[3], Emilia Rydz MD[2], Lawrence Chow MD[3], Amy Salmon PhD[4], Anita Palepu MD MPH[3,4], Peter Dodek MD MHSc[4,5], Heather A. Leitch MD PhD[6], Andrea Townson MD[7], Diane Lacaille MD MHSc[8], Vishal P. Varshney MD[9], Elizabeth Stanger[10], Nadia A. Khan MD MSc[1,3]

[1]Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada
[2]Department of Emergency Medicine, University of British Columbia, Vancouver, BC, Canada
[3]Division of General Internal Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[4]Centre for Health Evaluation and Outcomes Science, University of British Columbia, Vancouver, BC, Canada
[5]Division of Critical Care Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[6]Division of Hematology, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[7]Division of Physical Medicine and Rehabilitation, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[8]Division of Rheumatology, Department of Medicine, University of British Columbia; Arthritis Research Canada.
[9]Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia, Vancouver, BC, Canada
[10]St. Paul's Hospital, Providence Health Authority, Vancouver, BC, Canada

Word Count: 3681
Abstract: 286
References: 48
Figures:1
Tables: 4

Co-Author Email Addresses:
farhadgt@student.ubc.ca
kirarich@gmail.com
debsrosen@gmail.com
emi.rydz@gmail.com
lchow@alumni.ubc.ca
asalmon@advancinghealth.ubc.ca
apalepu@hivnet.ubc.ca
peter.dodek@ubc.ca
hleitch@pacifichematology.ca
andrea.townson@vch.ca
dlacaille@arthritisresearch.ca
vvarshney@providencehealth.bc.ca
estanger@providencehealth.bc.ca
nakhanubc@gmail.com

Address for Correspondence:
Farhad Ghaseminejad MSc
1901-535 Smithe Street
Vancouver, BC, V6B0H2
P:778 986-7050
Email: farhadgt@student.ubc.ca

ABSTRACT

Objective: To identify physician perspectives on factors associated with physician burnout, protective factors against burnout, and to seek potential solutions for this pervasive problem.

Design: A qualitative study with semi-structured focus group interviews using a systematic framework analysis

Setting and participants: Physicians from general internal medicine (GIM) and the emergency department (ED) at two urban tertiary care hospitals in Vancouver, Canada were recruited. Separate GIM and ED physician focus groups were conducted virtually from July 2021-Dec 2022, led by an independent facilitator. Audio recordings from focus group sessions were then transcribed for analysis.

Results: 41 physicians (29 GIM and 12 ED) participated in the focus groups. The dominant themes for organizational factors attributed to burnout that were highlighted by both groups included heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Other contributing factors that were only emphasized by GIM physicians were pressure to work out-of-scope of their practice, pressure to admit and discharge patients quickly, as well as sexism in the workplace. Factors unique to ED physicians included experiencing violence in the workplace and having to assess patients in waiting rooms. Protective organizational factors included time to build rapport with patients, staff collegiality, working within their scope of practice, and feeling rewarded and valued by leadership. Interventions suggested by physicians included improving channels of communication between staff, increasing flexibility in scheduling, and strengthening hospitalists' services.

Conclusions: Most organizational factors driving burnout were common to both GIM and ED physicians, including heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Leveraging protective factors and intervening on organizational factors attributed to burnout such as improving communication and enhancing support services may be effective in addressing the physician burnout epidemic.

Strengths and limitations of this study

- Multiple standardized focus group interviews were carried out, providing physician perspectives on specific systems issues in a hospital setting driving physicians burnout.
- Comparison and contrasting systems issues experienced by physicians that provide significant services in hospitals, the Emergency Department and General Internal Medicine.
- Physician perspectives on possible solutions to systems issues were collected that may be helpful in organizational initiatives for improving physician wellness.
- Systematic framework analysis was applied to identify themes converging from each focus group.
- Findings may not be generalized to other non-teaching hospitals or health systems or to other specialties.

INTRODUCTION

The burnout phenomenon is defined by Maslach *et al.* as a syndrome characterized by depersonalization, emotional exhaustion, and perceived low sense of accomplishment [1]. A systematic review of 33 qualitative studies on physicians' perspectives on burnout ranked stress factors contributing to burnout as first organizational, then relational, and lastly individual [2]. Organizational factors included heavy workloads, high amount of paperwork, and insufficient time for physicians to spend with their patients and to attend to their personal lives [3–5]. Relational factors referred to the conflict between professionals in decision-making. These conflicts often arise due to differences in opinion and disagreements between different departments and services. Lastly, a few studies suggested individual factors such as burden of responsibility, feelings of guilt, helplessness and doubt about abilities also contributed to physician burnout [6,7].

Increasing prevalence of physician burnout have been reported across the world, with a prevalence as high as 67% in 2022 at hospitals in Canada [8]. Burnout contributes to the physician shortages observed throughout Canada [9]. The Canadian Medical Association's national physician health survey in 2021 reported that 49% of respondents considered reducing their clinical hours in the near future, and those who experienced more burnout were more likely to express their intention to reduce clinical hours compared to physicians who did not report burnout [10]. Therefore, improving physician wellness is now a priority for health care systems. Although causes of burnout in physicians are multifactorial, organizational factors have been reported as more important than individual factors such as impaired coping skills or lack of resilience among physicians [11]. Although most wellness interventions have focused on improving individual-level factors such as physicians' personal behaviors and skills, organisational changes may contribute

to greater and more long-term improvements in wellbeing [12]. However, there are currently few published data about specific organizational factors that contribute to physician burnout [13] and few institutions have employed a comprehensive approach to tackling physician burnout [14].

Our group previously determined that at least 2/3rds of physicians working in the Emergency Department (ED) and in General Internal Medicine (GIM) experienced burnout, and systems issues were considered to be the most important factors underlying burnout [8,15]. Here, we conducted a qualitative study to identify specific systems-issues that contribute to burnout, organizational factors that are protective, and physician-derived solutions. We utilized focus groups of ED and GIM physicians, as less is known on the first-hand perspective of hospital-based physicians [15,16] in comparison to general practitioners [17,18] on specific systems causes of burnout. Additionally, we previously found that ED and GIM physicians experience high rates of burnout as front-line care providers who often collaborate. We report our findings from a framework analysis of focus group interviews to develop a comprehensive understanding of burnout in hospitals.

METHODS

Study design

We used a qualitative research design with semi-structured independent focus group interviews analyzed using the Framework Method [19,20]. The consolidated criteria for reporting qualitative research (COREQ) were followed [21].

Setting, participants and recruitment

All physicians from GIM and ED groups at two tertiary care urban academic hospitals in Vancouver, British Columbia, Canada were invited to participate in the study. Given that the interviews were meant to provide a safe space for discussing organizational issues, six physician leaders were excluded from participating in the focus groups from both groups. The division of General Internal Medicine includes 55 physicians (40% women, 75% less than age 50 years), and the Department of Emergency Medicine includes 43 physicians (36% women, 68% aged less than 50 years) who work at one or both of these hospitals. Physicians were sent an initial email from physician peers within each group inviting them to participate, two reminder emails over a 6-8 week period. All physicians who agreed to participate in the focus groups were included (29/51= 57% GIM and 12/41=29% ED response rate excluding physician leaders). All physicians received remuneration for their time at standard physician remuneration rates at our hospitals.

Interview guide and focus group interviews

The interview guide was developed by a review of the literature [22,23] including drawing from the Institute for Healthcare improvement Framework for Improving Joy in Work [24], and Mayo Clinic work on organizational strategies to improve wellness [25], and content experts in physician wellness, moral distress, and qualitative research methodology from the research team. The guide was further refined with feedback and pilot tested with peer physician members from GIM and ED who later joined the project to enhance recruitment, and to improve reliability, clarity, and answerability of the guide. The interview guide asked questions on 1. Organizational factors that are perceived to drive burnout, 2. Organizational factors that bring joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout. The interview guide is included in the supplementary material (Appendix I).

There were 5 focus groups held with 6 to 13 physicians in each group (three independent GIM physicians and two ED physicians focus groups) from July 2021 to December 2022 in a staggered fashion. An experienced female facilitator (Elizabeth Stanger, MSc.) was responsible for facilitating the focus groups. The facilitator was a project manager working at the health authority in British Columbia with expertise in operations and program planning across multiple hospital-based programs and facilitation in focus groups. The facilitator was not known to the participants. A peer physician who was a member of the project team was also present at each of the focus groups. Focus groups were held virtually via the Zoom© platform during the COVID-19 pandemic. Participants provided verbal consent for the session recording at the beginning of the focus group interview. Participants were informed that quotes from the data analysis will not be linked to the individuals and no identifying information will be recorded or shared. The study

was approved by the Providence Health Care Research Ethics Board. The duration of each interview session was approximately 90 minutes. Interviews and number of focus groups were continued until no new themes emerged; this was determined by the facilitator and physician present at the session. Audio was recorded and transcribed using Otter.AI, Inc. (Mountain View, California). Transcripts were reviewed and validated by the facilitator and the peer physicians, a process through which they were de-identified and checked to ensure accurate recording and true reflection of the discussion. No repeat interviews were conducted. Transcripts and framework analyses were returned to each of the peer physicians who attended each focus group for any corrections, validation, and to ensure appropriate meaning. The identifying information of individual physicians and their expressed opinions remains confidential.

Framework analysis

Written transcripts recorded from focus group sessions were systematically analyzed using framework analysis, as described by Ritchie and Spencer [26]. The five key steps of framework analysis are data familiarization, framework identification, indexing, charting, and mapping/interpretation [27–30]. De-identified transcripts were initially reviewed thoroughly by two independent data coders and key concepts and patterns were highlighted. Reflective notes and impressions were made based on the depth and recurrence of the topics discussed. After this data familiarization step, the highlighted themes by the reviewers were cross-referenced and core themes were selected. The broad categories were defined from our research questions and the themes emerged from reviewing the transcripts. Once the themes were selected and agreed upon by the reviewers, a table was made for each of the broad categories where the rows listed the selected themes, and the columns were labelled GIM and ED. Findings from the three GIM and

two ED focus groups were compiled respectively, and differences and similarities between the GIM and ED groups were tabulated. Direct quotes from all transcripts in support of each theme were selected and assigned in corresponding cells of the tables. This organization also allowed for a more objective comparison of evidence gathered from the two groups of physicians. Lastly, interpretation of the framework matrix was done based on contributions of the entire research team through multiple revisions and impressions. Framework analysis was conducted manually. The most frequently recurring themes were reported as major themes listed in order of decreasing frequency in the tables.

Patient and public involvement

None.

RESULTS

Baseline characteristics

There was a total of 41 GIM (n=29) and ED (n=12) physicians participating in focus groups with 44% women participants (Table 1). The emerging themes from focus group interviews were organized in three major categories of 1. Organization factors that are perceived to drive burnout, 2. Organizational factors that reduce burnout by bringing joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout.

I. Organizational factors that are perceived to drive burnout

Issues in the work environment, relational issues between other physician colleagues and leaders, and workload were found common themes highlighted by both GIM and ED physicians. The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 2.

1. Interruptions and noise

Physicians found frequent interruptions while seeing patients or arranging care plans as a major challenge that affects their workflow as well as the quality of care they can provide to patients. Physicians working in hospitals experience frequent interruptions from needing to answer calls for tests, respond to or need to make requests to nursing or other physicians and trainee questions about patients. Additionally, occupational noise exposure is found to be highly disruptive. The internal ambient noises for example can be derived from crowded spaces, equipment and acoustics of the building.

2. Interdepartmental conflict

Frequent disputes and disagreements between different hospital services was another major contributing theme identified. Examples include disputes over which physician or admitting service would admit patients as most responsible physician or arguments about performing tests or consultations on patients. Physicians found the time and energy spent on resolving discrepancies in opinion on consultation and admission decisions to add extra unnecessary pressures to their roles.

3. Heavy workload and scheduling

Heavy workload, poor working hours and conflicting schedules constituted another major theme that was frequently noted by both GIM and ED physicians. Long and poorly scheduled working hours prevent physicians from attending to their personal lives and interests. GIM physician work variable schedules with unpredictable hours which may include weekends, while ED physicians work in fixed shifts that may be scheduled during workdays, evenings, nights, weekends or holidays. ED physicians also report pressures from needing to rapidly assess, manage, and potentially discharge their case load during fixed time shifts or possibly stay late to continue caring for sick patients.

4. Feeling undervalued

Feeling undervalued by leadership and other consulting services was a key factor that was suggested as a contributing factor to burnout. Physicians perceived that they were not being heard by leadership as issues that they faced were not addressed.

Other less prominent themes that were found to be reported by both GIM and ED physicians included: 1. Bureaucracy and inefficiencies, 2. Non-physician roles like order entry into the

EMR or portering patients within the department, or changing bedsheets, 3. Moral distress from not being able to address the social determinants of health for marginalized populations, 4. COVID-19 global pandemic, 5. Financial structures and remuneration where physicians are asked to perform work that is either underpaid or not paid such as administrative work. All emerging themes have been summarized in Figure 1., illustrating the factors that were common to both GIM and ED specialties as well as those that were unique to each. Appendix II includes a list of all associated quotes for each of the major and minor themes.

II. Organizational factors that reduce burnout by bringing joy and satisfaction at work

The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 3. Appendix III includes a list of all associated quotes for each of the major and minor themes.

1. Feeling valued

Both GIM and ED physicians reported that feeling valued by patients, colleagues, and leaders was a major factor bringing joy to work. Physicians reported having a sense of accomplishment and meaning through skilled patient care.

2. Having sufficient time to build rapport with patients

This theme was reported more frequently in GIM than in ED groups. Physicians found having enough time with patients to build a connection was a one of the satisfying aspects of their job.

3. Collegiality

This theme was reported more frequently in ED than in GIM groups. Physicians reported that supportive work environment and positive interactions with colleagues as major factors that bring joy to their role.

4. Doing physicians' work

Being able to focus on physicians' work such as patient examination, interacting with patients, as opposed feeling occupied by non-physician roles such as entering orders, note-taking, portering patients or making phone calls for testing as examples was another identified theme. This theme was reported by both GIM and ED groups. Physicians found the opportunity to focus on practicing what they trained for to be another satisfying aspect of their jobs.

III. Actionable interventions to reduce physicians' burnout

Physicians identified a number of solutions to address the identified themes that contribute to burnout. The 26 key interventions were recommended by ED and GIM physicians for each previously described theme are presented in Table 4. Please see Appendix IV for a complete list of all suggested direct quotes.

DISCUSSION

Organizational factors are thought to underlie physician burnout especially within hospitals but there are little data identifying these specific issues especially in GIM. Our study identified four main themes among GIM and ED physicians that contributed to feelings of burnout including 1. Interruptions and noise, 2. Interdepartmental conflict, 3. Heavy workload and scheduling, and 4. Feeling undervalued. The factors that were considered protective were largely the inverse of these: 1. Feeling valued by leadership, 2. Having time to build rapport with patients, 3. Cultivating collegiality and 4. Doing physicians' work. Most organizational issues perceived by physicians were common to both groups. Physicians also identified multiple potential strategies to improve wellness.

The first objective was to identify organizational factors that are perceived to drive burnout in physicians. In-line with the systematic reviews and meta-analyses on physicians' perspective on burnout [23,22,11], we found organizational-level factors to contribute to physician burnout. Agarwal *et al.* have previously described high quantity of work, non-physician roles, and feeling undervalued by local institutions as contributing factors to burnout in primary care providers [31]. They particularly described the perception of being undervalued as being rooted in lack of boundaries in responsibilities, inadequate communication and collaboration with leadership, and insufficient acknowledgment of the challenges faced by primary care providers [31]. Heavy workload [3,5,32–38], difficult working conditions, lack of time [3,33,35,38,39] and the constant pressure to perform tasks quickly are the most commonly reported organizational contributors to burnout [11]. In a cross-sectional survey from practicing oncologists, 73% reported symptoms of burnout that was driven by working in a chaotic atmosphere, feeling unappreciated, poor control over

workload, and discomfort in discussing workplace stress with peers [40]. In our study however, themes of interruptions and noise as well as interdepartmental conflict emerged as major stressors in the workplace. This is likely because qualitative studies on physician burnout in hospital-based medicine and particularly GIM and ED specialties are less common, leaving such fixable problems unidentified and unaddressed. One of the major sources of interdepartmental conflict is the frequent disagreement between services and the pressure to admit patients while both sides are overwhelmed and are not well supported. Although practically this issue arises between individuals, it is the organizational structure and process that places physicians on opposite sides of conflicts. Lastly, the other aspect of the interruption and internal ambient noise complaint is rooted in the over-stimulating and chaotic environment in which hospital-based care providers practice in, an issue that may be less of an issue in primary care settings. With regards to sexism in the workplace, female GIM physicians reported experiencing microaggressions and intimidation from older male staff which directly contributed to their experience of burnout. Gender bias has also been reported previously as a major barrier to career satisfaction by female surgeons and recognized as a risk factor for burnout [7].

Secondly, when exploring protective factors, being rewarded and valued were emphasized by both groups equally. Previous research recognized primary care providers' feelings of being undervalued by local institutions and health care systems as a major contributor to burnout [31]. Another study also identified lack of recognition as a contributor to burnout amongst physicians in French hospitals [41]. Interestingly, having time to build rapport with patients and reducing interruptions were more frequently suggested as protective factors by GIM physicians compared to their ED colleagues. GIM physicians often discussed having time to connect with patients and

improving the quality of that time by reducing interruptions as factors that bring satisfaction to their jobs. Meaningful physician-patient relationships had previously been described as a protective factor against burnout in family physicians, including major themes of patient-centered care, continuity, effective care, trust, and purpose [18]. During the COVID-19 global pandemic, creating such meaningful relationships was further hindered by the widespread use of telehealth and reduced patient time [17]. However, most studies were focused on family physicians and to our knowledge, these pertinent protective factors have not been previously reported from hospital-based providers. On the other hand, the last two identified factors of cultivating staff collegiality and doing physicians' work were more heavily emphasized by ED physicians. They found positive interactions with the staff, interesting cases, and good medicine as key factors that bring joy and satisfaction to their otherwise demanding roles. The concept of collegiality, teamwork, and fostering community amongst physicians as an effective way to protect against burnout has also been reported previously [7,31,42,43]. Although at face value collegiality may appear to be an individual-level factor, evidence suggests that organizational modifications are most influential in cultivating a satisfying and joyful environment for physicians. A recent qualitative study of job and life satisfaction amongst ED physicians suggests that regardless of physicians' self-identification as introverted or extroverted personalities, those with better job satisfaction tended to be more socially connected [44]. Overall, although protective factors that bring joy and satisfaction to physicians are often overlapping, it is important to consider the speciality-specific factors and to strengthen protective factors that are intertwined with the nature of each speciality. Moreover, augmenting areas where physicians find value in their roles and incorporating their perspective in organizational-level decision makings are fundamental in building resiliency against burnout.

Few previous studies have sought the perspective of the practicing physicians on interventions to prevent burnout. Additionally, few institutions have employed a comprehensive approach to tackle physician burnout as an organizational priority [14]. Lack of physician input into interventions to improve wellness may also underlie the lack of physician engagement in wellness interventions. Broad recommendations such as reducing and also compensating physicians for the time they spend documenting in the electronic medical record (EMR), expanding support staff, and increasing positivity and collegiality have been described to improve the well-being of health care providers [42]. Others suggested a cultural change from stigmatization and competitiveness to compassion and collaboration, starting from medical school training [45]. Primary care physicians also recommended solutions in another qualitative study around the general themes of fostering community amongst colleagues, advocating for reforms beyond institutions, promoting the primary care providers' voice, and recalibrating expectations and reimbursement levels [31]. In this study, we sought specific solutions from physicians, leading to a list of 26 actionable recommendations to be implemented (Table 4). As supported by the literature, we believe that direct discussions through similar repeated focus groups and ongoing facilitated peer support sessions [46] with input from physicians are fundamental to identifying contributors to burnout. To address the root causes at an institutional level, Shanafelt et al. proposed four fundamental components of promoting foundational programs, cultural transformation, rapid iterative experimentation, and sustainability [25,47]. Future studies should also integrate qualitative interview findings from physicians and operations leaders, and late career physicians, to comprehensively address the organizational factors driving burnout.

Although several informative themes have emerged from this study, our findings are not without limitations. One of the limitations is that while our study provided rich information on organizational factors in the ED and GIM at two urban tertiary care academic hospitals, our findings may not be generalized to hospitals, departments or health care models or specialties different from those under study as organizational issues may reflect local environments, available resources, and the patient populations. However, it is likely that the highlighted issues are common and would resonate with other groups and urban hospitals. Secondly, given the qualitative nature of the study, it is challenging to assign value to each of the themes identified from focus groups or individuals within each group. Even though most themes were selected because they were more frequently mentioned, it is unclear which organizational factor contributes the most to burnout and ultimately, which intervention would be most effective in reducing burnout. Thirdly, physician leaders were excluded from participating in the focus groups in order to provide a safe space for discussing organization issues. However, it should be noted that leaders may have additional perspectives on organizational issues [48]. There are also demographic limitations that should be considered including the relatively small sample size, discrepancies in the number of participants in each of the groups, and the fact that the majority of the participants were younger than 50 years old. Lastly, although the vast majority of challenges reported in the focus groups appeared to precede the global pandemic, it must be noted that the interviews were conducted during the pandemic. Nonetheless, identifying contributing factors to burnout during or prior to the pandemic are crucial and physician burnout is likely an overlooked issue that was particularly brought to attention during the COVID-19 pandemic.

CONCLUSION

Organizational issues that contribute to high rates of burnout in frontline physicians in hospitals include interruptions and noise, interdepartmental conflict, heavy workload, and feeling undervalued by leadership. Most of these contributing factors to burnout are resolvable, many of which can be addressed at low cost. Achieving wellness for health care providers must be a priority focus for health care systems, and organizational change is an important path to improving wellness.

ETHICS STATEMENT: This study was approved by the Providence Health Research Ethics boards H018-02999.

FUNDING: Medical Staff Association at Providence Health Care.

CONFLICTS OF INTEREST: There are no competing interests for any author.

AUTHOR CONTRIBUTIONS: NAK, AP, PD, HL, DL, ES, AS contributed to the design of the study. NAK, ES, DR, ER, VV, KR, AS, AP, AT and DL contributed to data collection and FG, ES and NAK contributed towards analysis. All authors contributed to interpretation of the results, and meaningful contribution to writing and accepting the final manuscript. NAK had full access to all the data in the study and is responsible for the overall content as guarantor.

DATA STATEMENT: Statistical code and dataset available upon request of the corresponding author.

REFERENCES

1. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113. doi:10.1002/JOB.4030020205

2. Kurzthaler I, Kemmler G, Holzner B, Hofer A. Physician's Burnout and the COVID-19 Pandemic—A Nationwide Cross-Sectional Study in Austria. *Front Psychiatry*. 2021;12:784131. doi:10.3389/FPSYT.2021.784131/FULL

3. Hasbrouck MA, Waddimba AC. The work-related stressors and coping strategies of group-employed rural health care practitioners: A qualitative study. *Am J Ind Med*. 2017;60(10):867-878. doi:10.1002/ajim.22753

4. Trockel M, Bohman B, Lesure E, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018;42(1):11-24. doi:10.1007/s40596-017-0849-3

5. Franz CE, Barker JC, Kim K, et al. When help becomes a hindrance: Mental health referral systems as barriers to care for primary care physicians treating patients with Alzheimer's disease. *Am J Geriatr Psychiatry Off J Am Assoc Geriatr Psychiatry*. 2010;18(7):576-585.

6. Prentice S, Elliott T, Dorstyn D, Benson J. Burnout, wellbeing and how they relate: A qualitative study in general practice trainees. *Med Educ*. 2023;57(3):243-255. doi:10.1111/MEDU.14931

7. Lu PW, Columbus AB, Fields AC, Melnitchouk N, Cho NL. Gender Differences in Surgeon Burnout and Barriers to Career Satisfaction: A Qualitative Exploration. *J Surg Res*. 2020;247:28-33. doi:10.1016/J.JSS.2019.10.045

8. Khan N, Palepu A, Dodek P, et al. Cross-sectional survey on physician burnout during the COVID-19 pandemic in Vancouver, Canada: the role of gender, ethnicity and sexual orientation. *BMJ Open*. 2021;11(5):e050380. doi:10.1136/BMJOPEN-2021-050380

9. Li K, Frumkin A, Bi WG, Magrill J, Newton C. Biopsy of Canada's family physician shortage. *Fam Med Community Health*. 2023;11(2):e002236. doi:10.1136/fmch-2023-002236

10. Physician wellness: New 2021 National Physician Health Survey findings — burnout, short-staffing and an overburdened system take their toll. Canadian Medical Association. Accessed November 25, 2023. https://www.cma.ca/physician-wellness-hub/content/physician-wellness-new-2021-national-physician-health-survey

11. Sibeoni J, Bellon-Champel L, Mousty A, Manolios E, Verneuil L, Revah-Levy A. Physicians' Perspectives About Burnout: a Systematic Review and Metasynthesis. *J Gen Intern Med*. 2019;34(8):1578-1590. doi:10.1007/s11606-019-05062-y

12. Fox KE, Johnson ST, Berkman LF, et al. Organisational- and group-level workplace interventions and their effect on multiple domains of worker well-being: A systematic review. *Work Stress*. 2022;36(1):30-59. doi:10.1080/02678373.2021.1969476

13. Cohen C, Pignata S, Bezak E, Tie M, Childs J. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ Open*. 2023;13(6):e071203. doi:10.1136/bmjopen-2022-071203

14. Longo BA, Schmaltz SP, Williams SC, Shanafelt TD, Sinsky CA, Baker DW. Clinician Well-Being Assessment and Interventions in Joint Commission-Accredited Hospitals and Federally Qualified Health Centers. *Jt Comm J Qual Patient Saf*. 2023;49(10):511-520. doi:10.1016/j.jcjq.2023.04.007

15. Ghaseminejad F, Rich KE, Rosenbaum D, et al. Differences in Physician Burnout by Specialty: A Cross-Sectional Survey. *Perm J*. 2024;28(3):58-68. doi:10.7812/TPP/24.040

16. Baugh JJ, Raja AS, Takayesu JK. Help Us Help You: Engaging Emergency Physicians to Identify Organizational Strategies to Reduce Burnout. *West J Emerg Med*. 2021;22(3):696-701. doi:10.5811/westjem.2020.49180

17. LeSage C. Physician Burnout and the COVID-19 Pandemic: An Analysis of U.S. Primary Care Physicians. *Honors Theses*. Published online June 1, 2022. Accessed May 19, 2023. https://digitalworks.union.edu/theses/2580

18. Hiefner AR, Constable P, Ross K, Sepdham D, Ventimiglia JB. Protecting Family Physicians from Burnout: Meaningful Patient-Physician Relationships Are "More than Just Medicine." *J Am Board Fam Med JABFM*. 2022;35(4):716-723. doi:10.3122/JABFM.2022.04.210441

19. EBSCOhost | 151054114 | Using Framework Analysis in Applied Qualitative Research. Accessed November 25, 2023. https://web.s.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=10520147&AN=151054114&h=lF6swakenz5iiW6eYrJ2M5oI2tSJMkeAK0bO9u4PTjxgJcgfluUL8JOx8NtXzYqWR5i%2fdHSNktTjH7MMulpiuA%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d10520147%26AN%3d151054114

20. Kiernan MD, Hill M. Framework analysis: a whole paradigm approach. *Qual Res J*. 2018;18(3):248-261. doi:10.1108/QRJ-D-17-00008

21. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-357. doi:10.1093/intqhc/mzm042

22. Panagioti M, Panagopoulou E, Bower P, et al. Controlled Interventions to Reduce Burnout in Physicians: A Systematic Review and Meta-analysis. *JAMA Intern Med*. 2017;177(2):195-205. doi:10.1001/jamainternmed.2016.7674

23. Cp W, Ln D, Pj E, Td S. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *Lancet Lond Engl*. 2016;388(10057). doi:10.1016/S0140-6736(16)31279-X

24. Improvement Area: Workforce Well-Being and Joy in Work | Institute for Healthcare Improvement. Accessed October 11, 2024. https://www.ihi.org/improvement-areas/improvement-area-workforce-well-being-and-joy-work

25. Shanafelt TD, Noseworthy JH. Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout. *Mayo Clin Proc*. 2017;92(1):129-146. doi:10.1016/j.mayocp.2016.10.004

26. Ritchie J, Lewis J, Lewis P of SPJ, Nicholls CM, Ormston R. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE; 2013.

27. Goldsmith L. Using Framework Analysis in Applied Qualitative Research. *Qual Rep*. Published online June 20, 2021. doi:10.46743/2160-3715/2021.5011

28. Hackett A, Strickland K. Using the framework approach to analyse qualitative data: a worked example. *Nurse Res*. 2019;26(2):8-13. doi:10.7748/nr.2018.e1580

29. Parkinson S, Eatough V, Holmes J, Stapley E, Midgley N. Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qual Res Psychol*. 2016;13(2):109-129. doi:10.1080/14780887.2015.1119228

30. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13(1):117. doi:10.1186/1471-2288-13-117

31. Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional Dissonance and Burnout in Primary Care: A Qualitative Study. *JAMA Intern Med*. 2020;180(3):395-401. doi:10.1001/JAMAINTERNMED.2019.6326

32. Sibeoni J, Orri M, Valentin M, et al. Metasynthesis of the Views about Treatment of Anorexia Nervosa in Adolescents: Perspectives of Adolescents, Parents, and Professionals. *PLoS ONE*. 2017;12(1):e0169493. doi:10.1371/journal.pone.0169493

33. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of qualitative literature: Lessons learnt. *BMC Med Res Methodol*. 2008;8:21. doi:10.1186/1471-2288-8-21

34. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol*. 2012;12:181. doi:10.1186/1471-2288-12-181

35. Chenail RJ. Learning to Appraise the Quality of Qualitative Research Articles: A Contextualized Learning Object for Constructing Knowledge. *Qual Rep*. 2011;16(1):236-248.

36. Petek D, Gajsek T, Petek Ster M. Work-family balance by women GP specialist trainees in Slovenia: a qualitative study. *BMC Med Educ*. 2016;16:31. doi:10.1186/s12909-016-0551-2

37. Beng TS, Chin LE, Guan NC, et al. The experiences of stress of palliative care providers in Malaysia: a thematic analysis. *Am J Hosp Palliat Care*. 2015;32(1):15-28. doi:10.1177/1049909113503395

38. Çiçeklioğlu M, Öcek ZA, Turk M, Taner Ş. The influence of a market-oriented primary care reform on family physicians' working conditions: A qualitative study in Turkey. *Eur J Gen Pract*. 2015;21(2):97-102. doi:10.3109/13814788.2014.966075

39. McGowan Y, Humphries N, Burke H, Conry M, Morgan K. Through doctors' eyes: a qualitative study of hospital doctor perspectives on their working conditions. *Br J Health Psychol*. 2013;18(4):874-891. doi:10.1111/bjhp.12037

40. Singh S, Farrelly A, Chan C, et al. Prevalence and Workplace Drivers of Burnout in Cancer Care Physicians in Ontario, Canada. *JCO Oncol Pract*. 2022;18(1):e60-e71. doi:10.1200/OP.21.00170

41. Sibeoni J, Bellon-Champel L, Verneuil L, Siaugues C, Revah-Levy A, Farges O. Workplace environment around physicians' burnout: A qualitative study in French hospitals. *Scand J Work Environ Health*. 2021;47(7):521. doi:10.5271/SJWEH.3977

42. Dillon EC, Tai-Seale M, Meehan A, et al. Frontline Perspectives on Physician Burnout and Strategies to Improve Well-Being: Interviews with Physicians and Health System Leaders. *J Gen Intern Med*. 2020;35(1):261-267. doi:10.1007/S11606-019-05381-0/TABLES/2

43. Makowski MS, Trockel M, Paganoni S, et al. Occupational Characteristics Associated With Professional Fulfillment and Burnout Among US Physiatrists. *Am J Phys Med Rehabil*. 2023;102(5):379-388. doi:10.1097/PHM.0000000000002216

44. Kase J, Doolittle B. Job and life satisfaction among emergency physicians: A qualitative study. *PLOS ONE*. 2023;18(2):e0279425. doi:10.1371/JOURNAL.PONE.0279425

45. Walsh G, Hayes B, Freeney Y, McArdle S. Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors. *BMJ Open*. 2019;9(9):e030209. doi:10.1136/BMJOPEN-2019-030209

46. Schwartz R, Shanafelt TD, Gimmler C, Osterberg L. Developing institutional infrastructure for physician wellness: qualitative Insights from VA physicians. *BMC Health Serv Res*. 2020;20(1):7. doi:10.1186/s12913-019-4783-9

47. Shanafelt T, Stolz S, Springer J, Murphy D, Bohman B, Trockel M. A Blueprint for Organizational Strategies To Promote the Well-being of Health Care Professionals. *NEJM Catal*. 2020;1(6). doi:10.1056/CAT.20.0266

48. Mitton C, Peacock S, Storch J, Smith N, Cornelissen E. Moral distress among health system managers: exploratory research in two British Columbia health authorities. *Health Care Anal HCA J Health Philos Policy*. 2011;19(2):107-121. doi:10.1007/s10728-010-0145-9

Table 1. Focus group participants demographics

Demographic	GIM Hospital 1 (n=16)	GIM Hospital 2 (n=13)	ED FG1 Hospital 1 (n=12)
Age years			
35-49	15	12	8
>50	1	1	4
Sex			
Woman	6	6	6
Man	10	7	6

Table 2. Major emerging themes and associated key quotes for organizational factors that drive burnout.

Major Theme	Key Quotes
1. Interruptions and noise	• Ex 1. *"The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value."* (GIM) • Ex 2. "*The other thing that has been a real pebble in my shoe lately is […] in terms of electronic devices and telephones in the hospital […]. In the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and here in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time, watching videos without headphones. And it's very disruptive."* (ED)
2. Interdepartmental conflict	• Ex 1. *"You are fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner."* (GIM) • Ex 2. *"One area that I still fear, and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because in internal medicine, we have such a broad mandate"* (GIM) • Ex 3. "*I know the person that just checked in with an eye problem at 11pm, they might get seen at 10 in the morning… it is so discouraging to go into there."* (ED)
3. Heavy workload and scheduling	• Ex 1. "*I think weekends are some of the worst times for faculty… We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team… and then you're often on call that night, then have to be back the next morning. So, I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week."* (GIM) • Ex 2. *"There's no such thing as a daycare that opens up at 7:00 [which] rules out a lot of dual physician family and or people with a kid in daycare and a partner… it makes life extremely more difficult. When really, we don't need to be there at 7:30 for patient care."* (GIM) • Ex 3. *"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly"* (ED)

4. Feeling undervalued	• Ex 1. *"Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes… on top of that you have to care for and role model for residents and medical students… and I don't think it's valued or recognized by the organization."* (GIM) • Ex 2. *"I do think our time isn't always valued by some of the consultants."* (ED)

Table 3. Major emerging themes and associated key quotes for organizational factors that reduce burnout by bringing joy and satisfaction at work

Major Theme	Key Quotes
1. Feeling valued	• Ex 1. *"[knowing that] you're a valued member of the organization, that if you if you left, you would be missed… [and] you're rewarded for bringing value to the organization"* (ED) • Ex 2. *"It's good to feel like you could make a difference in a patient population… [and] when my skill sets are valued."* (GIM)
2. Having sufficient time to build rapport with patients	• Ex. 1. *"The sense of connection that I had to the patient and the gratitude that this patient expressed [was what I found] satisfying."* (GIM) • Ex. 2. *"Having a patient actually know who I am and remember who I was, it was just incredible."* (GIM)
3. Collegiality	• Ex 1. *"Just the interaction I got with all the staff and the collegiality… everyone is friendly, smiling, and helpful."* (ED) • Ex. 2. *"Colleagues that you can trust and turn to bounce things off of".* (ED)
4. Doing physicians' work	• Ex. 1. *"When someone's sick… [doing] something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day."* (ED) • Ex 2. *"Sense of getting to use my skills and training to help this person"* (GIM)

Table 4. All 26 key actionable interventions suggested by GIM and ED physicians to reduce burnout, listed in correspondence to the emerging themes.

Theme	Suggested intervention
Interruptions and noise	1. *"We need to alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office or at the dermatologists."* (ED)
Heavy workload and scheduling	2. *"A communication app, where individuals would sign-in to their role in the hospital every given day"* (GIM) 3. *"Having a hospitalist to help with the load"* (GIM) 4. *"A way to redirect phone calls so that they're batched or prioritized."* (GIM) 5. *"Flexibility in scheduling… having locums to take unwanted call shifts/weekends"* (GIM) 6. *"Post-call days or wellness days"* (GIM) 7. *"Rather than us calling five different [people] there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low-lying fruit that is contributing to our burnout, for sure."* (ED)
Interdepartmental conflict	8. *"Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them […] like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay."* (GIM) 9. *"Cultural change within surgical services […] more buy in from higher ups in terms of surgical services, like accepting the actual surgical issues […] it would be nice for the surgical services to take ownership of their patient."* (GIM) 10. *"Defining boundaries of our specialty (i.e., admission criteria)"* (GIM) 11. *"Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care."* (GIM) 12. *"Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER."* (GIM) 13. *"Culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."* (ED)

Bureaucracy and inefficiencies	14. *"More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders."* (GIM) 15. *"Reducing the amount of administration with order entry with Cerner."* (GIM)
Non-physician roles	16. *"Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker, housecleaners, porters)"* (GIM and ED) 17. *"Have a chronic clinical associate or like nurse practitioner on each team."* (GIM) 18. *"Workforce planning and hiring enough people for the future."* (GIM) 19. *"Have people ED to help [patients] fill out the paperwork for housing, get them better clothes, get them better food."* (ED) 20. *"A social/behavioural ICU"* (ED)
Patient Experience in the Waiting room	21. *"Having a quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."* (GIM) 22. *"Waiting room better staffed, maybe with someone who's looking after these patients, watching out for, you know, signs of people escalating, people becoming more violent."* (ED)
Financial structures and remuneration	23. *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied… So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load."* (GIM) 24. *"Improving remuneration to attract fellows to live/work in Vancouver."* (GIM)
Violence against physicians	25. *"Physical barriers to actually protect [physicians]."* (ED) 26. *"Offsite opiate overdose [and] sobering units"* (ED)

Figure legend

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

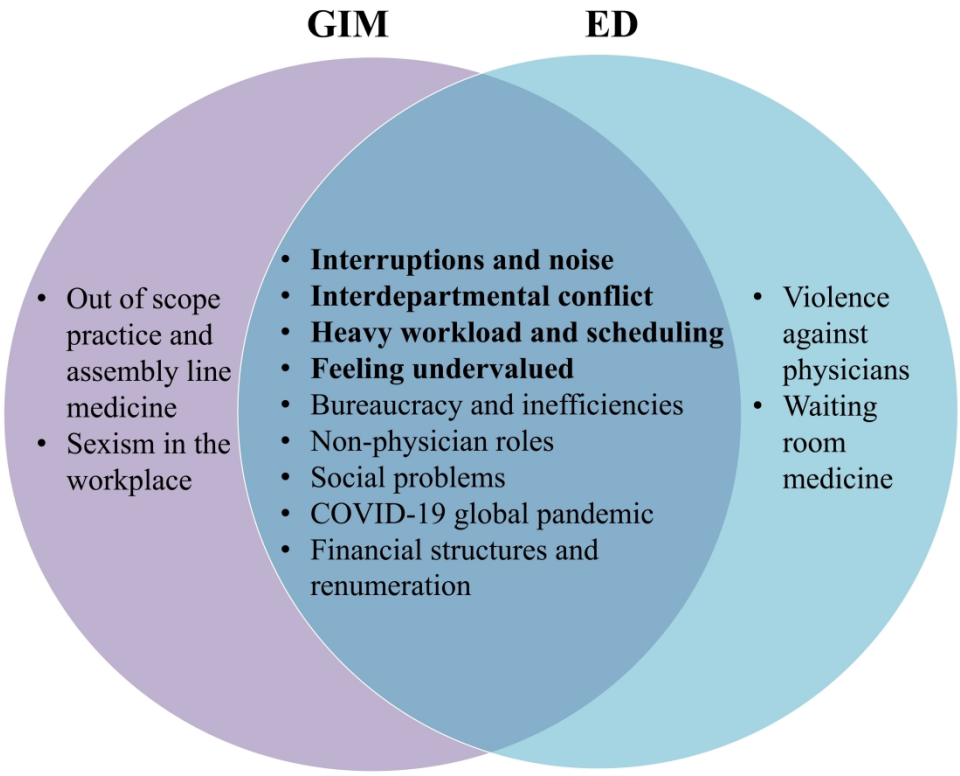

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

500x475mm (300 x 300 DPI)

APPENDIX I

Semi-Structured Focus Group Questions

Preamble for participants:

Thank you for taking the time to participate in this focus group. I would like to first explain how this focus group will take place. My name is XXX and I am a XXX doing a research study on system-level sources of workplace burnout.

We recently conducted a survey on burnout in the Department of Medicine and identified several important things. First, the majority of physicians are experiencing burnout right now. Second, almost 40% of physicians struggle with work-life conflict. And third, members rated reducing work inefficiencies and non-physician clerical work as *the most important* strategies to reducing burnout.

So, the purpose of this focus group is to try to identify those aspects of work including the work inefficiencies and the non-clerical work that contribute to burnout in your {division/department}. We would like to understand your thoughts on what are the system level factors that are challenging and that cause burnout feelings for you and others in your group and what are your thoughts on the potential solutions to these system level factors.

Our discussion should take about 60-90 minutes. With your approval, this session will be audio-recorded and notes will be taken during the session by a facilitator, for analysis later. No personal identifiers will be linked to the recording or the notes—only a code, which is known only to the research coordinator. We may use direct quotes of things you say in the focus group in reports of research findings. If your quotes are used, your name will not be linked to them, nor will any information that would identify any person. We would also like to remind all participants that the information shared today should be treated as confidential and not shared outside of this room.

Please feel free to answer our questions based on your ideas about this topic, or by thinking of examples from your own experiences, or those of your colleagues. There are no right or wrong answers.

Semi-structured focus group questions:

What matters most to physicians at work

1. Before we start talking about the sources of burnout, we want to understand, what matters to you at work? What brings job satisfaction? What creates pride in the organization? What does it look like when we're at our best?

Organizational/work based sources of burnout

2. What are the specific frustrations, impediments or things at work that get in the way of attaining what matters most to you at work.

Probe: What are the pebbles in your shoes? The processes, issues or circumstances that, if we could only deal with them, it would make it so much easier for you to do what you really want to do when you practice medicine.

Probe: What are the frustrations or impediments at work that get in the way of your work life balance?

Organizational/work based Solutions to Burnout

3. Thinking to the pebbles in your shoes, what are some strategies that would help you get to what matters most to you when taking care of patients?

Probe: What are some strategies that would help you achieve better work life balance?

Probe: What could division heads, department heads and hospital leadership do?

APPENDIX II

Category I: Contributing Factors to Burnout

Theme	GIM	ED
Feeling undervalued	- "Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes." - "Our time and our efforts are less valuable than other doctors in the hospital." - "On top of that you have to care for and role model for residents and medical students…and I don't think it's valued or recognized by the organization." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore."	- *"I do think our time isn't always valued by some of the consultants."
Workload and scheduling	- "Relationship building with the patient and really showing them that we care about them seems to disappear and the exhaustion of the workload and day to day things that I'm now responsible for… the whole process has become very distant and almost impersonal." - "I could work the same number of hours on a different rotation, and I could function I can even have like, personal life after hours. care for my kids but the CTU I can't."	"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly."

	- "One is all the calling and the figuring out about scheduling for patients, when they're going to have their scope, when they're going to have their surgery when a surgical service is going to see them, can I get in touch with a surgical service?" - "The sheer number of patients" - "Holding the front and making sure nobody dies until the next day without really having much time to think about the active issues or if an interesting case has been admitted." - "Hard to establish that that relationship, but at the same time, you're trying to get them out of hospital as soon as you can, when a lot of them don't want to." - "There's no such thing as a daycare that opens up at seven. And so you basically, rules out a lot of dual physician family and or people as a kid in daycare and a partner like it makes life extremely more difficult. When really we don't need to be there at 730 for patient care." - *"When you think about your job, as a teacher, your job as a physician, and then also you're kind of having to always engage with the emergency department and deal with what's coming, coming in to see to you, it's almost like you've got three jobs that you're trying to do. And then given the complexity, the social complexity of the patients that you're that you're working with…"	

	- "Sometimes when you're just too busy, I find sometimes like, I don't really get that fulfilment from patient interactions, like, it's nice to have that time to, like, be present and, you know, get something personally out of that interaction as well." - "I think coming back to our structure and function on the CTU, I think weekends are some of the worst times for faculty. We're here on the weekends, we are expected to round on the weekends when we're there. We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team. So I think weekends are pretty brutal. And then you're often on call that night, then have to be back the next morning. So I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right." - "I think it's interesting how it's pretty consistent all across the board whether or not you know,	

	we're single, or have a partner or have a dog or kids, I think everybody's life is on hold. I think it affects people differently. I have three kids. And, yeah, and my husband's also in medicine. So it's very, very chaotic. And when I'm on service, I feel like, I feel like, I take a deep breath and go under water for like two weeks, and then come out the other end and mess up everything, many times. dinners, games, extracurriculars for the kids all the weekend stuff, family stuff, it's tough, it's really tough. I had to do less call, I have to give away as much of it as possible or take on less weekend work. " - "Just want to emphasize that phrase that life gets put on hold when you're on service. Because that's, I think, is a very abnormal way of working. You know, everybody else has, you know, a balance where they work and they have their life… like I don't answer my emails, I don't clean my home, I like don't eat well, I don't exercise. And then I try and make up for it on my like week off, which, again, it's not, it's not necessarily the best way to live." - "And that's partially due to agency and lack of control over what we do and do not do. But if you can't take a minute to think through things really thoughtfully. We're internist, we like to think so that's a big part of what we do, or I think wellness, for me."	

Out of scope practice and assembly line medicine	- "We're asked to look after patients that are sort of outside of the range of expertise that we were actually trained in (i.e., trauma patients)." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex." - "I have lots of institutional pressure that's coming at me to move people through and be efficient." - "You kind of get reduced to like a mechanical check, check, check. And on to the next one, like, I find, I really don't get that fulfilment, from, you know, the interaction as much as it should be anyways."	
Interruptions and noise	- "I get woken up, and I have to like deal with some, you know, something like that we're fighting back or disposition issue, like, I can't go back to sleep for a while." - "The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value." - "The Emerg doc at the 11th takes five minutes to interrupt my review with the patients who present this patient, the residents which you know, whatever, but then we say, well, this patient would be	- "An overhead paging system that really sometimes just interrupts you so many times that it interrupts your train of thought." - "The other thing that has been a real pebble in my shoe lately is the fact that in terms of electronic devices and telephones in the hospital, yes, I find where you know, in the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and hear in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time watching

	more appropriate with psychiatry." - "So it's not like you're always standing at a computer where you can enter an order. So you can't you're interrupted, to put in something instead of just saying, Can you give them whatever? And then saying yes, no problem. You have to then interrupt whatever you're doing, go find a computer and do it before you forget, because it's one of 1000 interruptions that has happened in that last hour." - *"It's very frustrating having to deal with all the noise issue..." - "I think one of the strongest visceral reactions I have is when I am distracted in the middle of doing something that I think is important like reviewing it case with a resident or learner. And we're sort of deep in thought and we're having a good time kind of discussing some of the interesting aspects of a case. And then to be pulled away from that by a phone call, or, you know, a nurse coming by and, and just demanding kind of your attention, when you really were kind of in a flow state. And it's hard to have a sustained flow state in the hospital setting, I get it, it's an acute place. But I certainly think there are better ways of managing the distractions and triaging the distractions so that it's not all the time always."	videos without headphones. And it's very disruptive." - "When you dictate and somebody else dictates next to you, they will dictate into your system. So you actually have to like because it's so loud." - "Definitely feeling pressed for time in a number of different ways. One because of the constant interruptions…"
Bureaucracy and inefficiencies	- "Battling the bureaucracy, so to speak, bushwhacking through	- "Some of the technical issues, like having to log in to

	the bureaucracy just to get basic patient care completed."	different systems, I guess you have to log into Paris separately from logging into Cerner." - Dictaphones breaking - Cerner freezing - Broken equipment
Interdepartmental conflict	- *"It's very frustrating having to deal with … the politics and fighting with different services." - "Talking to eight different surgeons to find out somebody who's willing to look after this patient." - "It's hard for me to understand why the opinion of every other consultant in the hospital is more important than my opinion as an internist." - "You're fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner." - "One area that I still fear and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because internal medicine, we have such a broad mandate, there's almost nothing we can't manage short of cutting someone open. Right? Many of these cases, we don't offer much. And the fact that everyone else has the ability to refuse a case and we don't, we are then expected to see the case. This is particularly made worse when	- *"I do think our time isn't always valued by some of the consultants." - "One of the things would be the fact that for a lot of our consultants, the day ends at about 430. And everything, held overnight, which means, you know, we're managing complex elderly patients." - "But I know the person that just checked in with an eye problem at 11pm. They might get seen at 10 in the morning, like literally, he says it is so discouraging to go into there.

	our trainees are facing really heavy loads in the emergency department." - "It takes up so much more of your time to try and deflect a consult and a fight back and to push against the system, that the path of least resistance is often just doing the work and admitting the patient. And you have to decide in that moment, are you going to engage? Or are you not going to engage?" - "I always ask what is the best thing for the patient, right? But at the same time, you don't want to reward the system for handing us crap, right? And so I feel that real problem, that tension and like I said, most times I tell the team just take it because I still think we in the end probably are the best person, but it still feels like we've been abused a little bit, right?" - "You know, one of the big issues that the hospital has dealt with, and our department in particular has dealt with for quite a few number of years, is this pay for performance of the emergency department, which basically forces the department to push patients towards any admitting service. And since internal medicine is the greatest service in the world, that can take care of everyone, we are usually the default when no other service is willing to take patients, because they are either too complex or too sick, or, you know, they are too multi system, or, you know, they're too young. There's been	

	instances where patients are not adequately evaluated, or worked up and then just deflected or deferred to Internal Medicine Service to do their job, because they feel the pressure to push them along, because they get paid more, you know, that that department makes more money for their activities. So it's a way and it doesn't benefit us in any way, except just adds to our stress - "Like the number of times where I've just been pushed to admit somebody that I'm not done assessing or just maybe needs a few hours in the ER and could avoid being admitted, is incredible. And that it just it defeats logic. Sometimes, it's just simply like, 'Get out of my Emerg I don't care if the patient only needs two more hours.' You know. it's actually really an important part of something small, that could be fixed that would add a lot of positivity to our quality of life"	
Social problems	- "I think part of the problem is that people don't have to be as accountable with some of our individuals who cannot advocate for themselves." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex."	- "Sometimes people come in, because they're hungry, or because they want a cheese sandwich or a blanket or something. And even though I know they need that, for me, it doesn't give me a sense of satisfaction at the end of the day, as opposed to having someone who's medically ill."
Non-physician roles	- "We need to move patients, we need to make room, we need to	- "I'm constantly coming up against logistical barriers, like

	have ways to discharge people. And so that's what makes it like a s to me, because I'm just the manager, you know, I'm, I'm not practicing medicine at that point." - "… you're also kind of playing social worker at the same time."	I can't find the patient, I have to change the bed myself. There's no nurse to help." - "Portering, changing sheets, cleaning up garbage. Other things I've heard are things like doing nursing assessments, because there's maybe not enough time, even for the nurse to do an assessment." - "Having to run around and find the patient, changing your own sheets cleaning up through, you know, cleaning up the bay or the room for the patient." - "Having to bring them into a stretcher that is messily made by me with garbage on the floor that I've tried to clean up but haven't had time to clean up completely." - *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."
Violence Risk		- "I have seen a bit more agitated patients that are placing staff at risk - like we're just held to the standards, it's versus we don't have a system in place to make us feel safe to assess that patient." - "Biggest thing that is not working is our approach to violence in the emergency department."
Waiting room medicine		- "We do have a problem with the triage and because we don't have enough physical

		space to put patients into beds, so sometimes the triage is quite questionable. So for example, suicidal patients put in the waiting room." - "a care space that is not appropriate for their illness, and then have to ask them to go back to a waiting room full of people who are maybe intoxicated or experiencing other illnesses and maybe not an appropriate space for them." - "There's literally not a single space where you can assess a patient. So it's like, how are we supposed to be to our job if we don't have spaces to assess patients" - "Patients have no privacy. There's nowhere to examine them. There's nowhere to address them."
COVID-19 pandemic effect	- "And I'm hearing like, we may be asked to even offer more because we were able to take COVID like a champ. That worries me… like we could burn out and we can become more and more inclusive of what we're doing and not have our boundaries and not be a specialty anymore. So as we do restructuring, as we talk about our capacity to take care of our patients, we also have to talk about our, our skill set, what our, what our boundaries are. "	- "We in the emergency have piled on risk upon us, like we are facing more risk than we did in the past. And I just, that became very obvious to me in the pandemic."
Sexism in the workplace	- "This may not be a very popular thing to say. But I think sexism does still exist to in the workplace... But as a woman, I think there are	

	potentially more opportunities to get frustrated because of the way you might be treated, or the nurses not respecting your authority as much as your white male colleague, for example, or pushback you get on the phone. So I think that might also play into kind of wearing down faster." - "Ya, like [they] said, I definitely see a difference in the workplace in the way my female colleagues are treated than how I'm treated from other physicians. Definitely from nursing staff and allied health. And so I think that that It has to contribute to how people end up experiencing burnout." - "I would also echo that there's a lot of intimidation from surgeons, male, older, towards female physicians. And it might not be very, it's not like very discreet necessarily. It's just, it's kind of like microaggressions. And, yeah, it's definitely there."	
Financial structures and remuneration	- "And so that struggle between how much should we make for the work versus how much work is reasonable for us to do at once? I think is really is really tough… But I think that that tension is really hard to get away from. And, and it always feels like oh, if I just see one more, or if I stay a little bit longer tonight than I can make a bit more of it. But a lot of that doesn't lead to good care and doesn't lead to us feeling healthy."	- *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."

	- *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right."	
Lack of camaraderie for difficult cases	- *"I talked about this, the council of the elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really	-

	well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX III

Category II: Protective Factors that Bring Joy and Satisfaction to Physicians

Theme	GIM	ED
Being rewarded and valued	- "It's good to feel like you could make a difference in a patient population." - "When my skill sets are valued."	- "You're a valued member of the organization, that if you if you left, you would be missed." - "You're rewarded for bringing value to the organization."
Having time to build rapport with patients	- "To connect with the person, and they felt they felt sort of heard in the end, we were able to sort of events, events, things, and it was that connection with the patient that, that I found sort of satisfying." - "The sense of connection that I had to the patient and the gratitude that this patient expressed." - "And having a patient actually know who I am and remember who I was, it was just incredible."	- "Positive interactions with the patients'
Reducing interruptions	- "Having time to interact with patients without being interrupted."	
Staff collegiality	- "I love my colleagues"	- "Positive interactions with the staff" - "Such wonderful colleagues everywhere. Like, literally everyone is friendly, smiling, and helpful." - "Just the interaction I got with all the staff and the collegiality." - "Colleagues that you can trust and turn to bounce things off"

Doing physicians' work	- "Sense of getting to use my skills and training to help this person"	- "When someone's sick, might actually do something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day." - "Interesting cases and good medicine, as well as, as well as patient satisfaction, but and, you know, and good outcomes."

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX IV

Category III: Actionable Interventions to Reduce Burnout.

Theme	GIM	ED
Workload and scheduling	- "Communication app, basically where individuals would sign in to their role in the hospital every given day" - "Having a hospitalist to help with the load." - *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized." - Flexibility in scheduling (having locums to take unwanted call shifts/weekends) - "post-call" days or wellness days	- "Rather than us calling five different there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low lying fruit that is contributing to our burnout, for sure."
Interruptions and noise	- *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized."	- "I think we need to, you know, alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office at the dermatologists."
Bureaucracy and inefficiencies	- "More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders." - "Reducing like the amount of administration with order entry with Cerner."	

Interdepartmental conflict	- "Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them. So something like might look like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay." - "Cultural change within surgical services." - "More buy in from higher ups in terms of surgical services, like accepting the actual surgical issues, because I've taken care of many surgical issues on CTU, even post op, they come back to CTU. Like it would be nice for the surgical services to take ownership of their patient." - Defining boundaries of our specialty (ie. Admission criteria) - Interdepartmental relationships: Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care. - Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER (the participant cited that this exists at the Mayo clinic).	- "It'd be nice to the culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."

Social problems		- "A social/behavioral ICU" - "Improved social support person."
Non-physician roles	- "Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker)" - "It would be nice to have like a chronic clinical associate or like nurse practitioner on each team." - Workforce planning and hiring enough people for the future.	- "Can we get more cleaners? Could we get more porters, that kind of thing." - "Trying to get us another staff member. to rise to get patients to where you can examine them and have them ready for examination and helping you get what you need to get that patient through so that you're not doing as many non-clinical tasks. -- an LPN is probably the most ideal." - "More housecleaners" - "Have people emerge and help them fill out the paperwork for housing, get them better clothes… get them better food than the sandwiches and things are not made with real food."
Violence Risk		- "Physical barriers to actually protect." - "Offsite opiate overdose unit" - "Offsite sobering units"
Waiting room medicine	- "Having quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."	- "Waiting room better staffed, maybe with someone who's like looking after these patients like watching out for, you know, signs of people escalating, people becoming more violent."
Financial structures and remuneration	- *"Recently on CTU (clinical teaching unit), we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time	

	to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - "So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load. Because really what strikes us as the most stress is when we're dealing with a lot of sick patients, a lot of training needs, and we don't have enough time. " - Improving remuneration to attract fellows to live/work in Vancouver. - Consider moving away from FFS (fee for service) and adopting AFP (alternate funding plan), or a mixed model. - Pay for time and quality, not clinical load	
Lack of camaraderie for discussing difficult cases	- Attending monthly rounds to discuss difficult cases or to just check in => *"I talked about this, the council of the	

	elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

BMJ Open

Organizational factors associated with burnout amongst emergency and internal medicine physicians: a qualitative study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2024-085973.R3
Article Type:	Original research
Date Submitted by the Author:	23-Dec-2024
Complete List of Authors:	Ghaseminejad, Farhad; The University of British Columbia Rich, Kira; University of British Columbia, Department of Emergency Medicine Rosenbaum, Debbie; The University of British Columbia, Medicine Rydz, Emilia; University of British Columbia, Department of Emergency Medicine Chow, Lawrence; University of British Columbia, Department of Medicine Salmon, Amy; University of British Columbia Palepu , Anita; University of British Columbia, Department of Medicine; University of British Columbia Dodek, Peter; University of British Columbia; University of British Columbia, Department of Medicine Leitch, Heather A.; University of British Columbia, Department of Medicine Townson, Andrea; University of British Columbia, Department of Medicine Lacaille, Diane; University of British Columbia, Department of Medicine Varshney, Vishal; University of British Columbia, Department of Anesthesiology Pharmacology and Therapeutics Stanger, Elizabeth; Providence Health Authority Khan, Nadia; University of British Columbia; University of British Columbia, Department of Medicine
Primary Subject Heading:	Health services research
Secondary Subject Heading:	Health policy
Keywords:	Burnout, Professional, Physicians, Burnout

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Organizational factors associated with burnout amongst emergency and internal medicine physicians: a qualitative study

Farhad Ghaseminejad MSc[1], Kira E. Rich MD[2], Debbie Rosenbaum MD[3], Emilia Rydz MD[2], Lawrence Chow MD[3], Amy Salmon PhD[4], Anita Palepu MD MPH[3,4], Peter Dodek MD MHSc[4,5], Heather A. Leitch MD PhD[6], Andrea Townson MD[7], Diane Lacaille MD MHSc[8], Vishal P. Varshney MD[9], Elizabeth Stanger[10], Nadia A. Khan MD MSc[1,3]

[1]Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada
[2]Department of Emergency Medicine, University of British Columbia, Vancouver, BC, Canada
[3]Division of General Internal Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[4]Centre for Health Evaluation and Outcomes Science, University of British Columbia, Vancouver, BC, Canada
[5]Division of Critical Care Medicine, Department of Medicine; University of British Columbia, Vancouver, BC, Canada
[6]Division of Hematology, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[7]Division of Physical Medicine and Rehabilitation, Department of Medicine, University of British Columbia, Vancouver, BC, Canada
[8]Division of Rheumatology, Department of Medicine, University of British Columbia; Arthritis Research Canada.
[9]Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia, Vancouver, BC, Canada
[10]St. Paul's Hospital, Providence Health Authority, Vancouver, BC, Canada

Word count: 3733
Abstract: 286
References: 48
Figures:1
Tables: 4

Co-author email addresses:
farhadgt@student.ubc.ca
kirarich@gmail.com
debsrosen@gmail.com
emi.rydz@gmail.com
lchow@alumni.ubc.ca
asalmon@advancinghealth.ubc.ca
apalepu@hivnet.ubc.ca
peter.dodek@ubc.ca
hleitch@pacifichematology.ca
andrea.townson@vch.ca
dlacaille@arthritisresearch.ca
vvarshney@providencehealth.bc.ca
estanger@providencehealth.bc.ca
nakhanubc@gmail.com

Correspondence to:
Farhad Ghaseminejad MSc, 1901-535 Smithe Street, Vancouver, BC, V6B0H2, Canada
Email: farhadgt@student.ubc.ca

ABSTRACT

Objective: To identify physician perspectives on factors associated with physician burnout, protective factors against burnout, and to seek potential solutions for this pervasive problem.

Design: A qualitative study with semi-structured focus group interviews using a systematic framework analysis.

Setting and participants: Physicians from general internal medicine (GIM) and the emergency department (ED) at two urban tertiary care hospitals in Vancouver, Canada were recruited. Separate GIM and ED physician focus groups were conducted virtually from July 2021-Dec 2022, led by an independent facilitator. Audio recordings from focus group sessions were then transcribed for analysis.

Results: 41 physicians (29 GIM and 12 ED) participated in the focus groups. The dominant themes for organizational factors attributed to burnout that were highlighted by both groups included heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Other contributing factors that were only emphasized by GIM physicians were pressure to work out-of-scope of their practice, pressure to admit and discharge patients quickly, as well as sexism in the workplace. Factors unique to ED physicians included experiencing violence in the workplace and having to assess patients in waiting rooms. Protective organizational factors included time to build rapport with patients, staff collegiality, working within their scope of practice, and feeling rewarded and valued by leadership.

Interventions suggested by physicians included improving channels of communication between staff, increasing flexibility in scheduling, and strengthening hospitalists' services.

Conclusions: Most organizational factors driving burnout were common to both GIM and ED physicians, including heavy workload and scheduling, frequent interruptions, interdepartmental conflict, and feeling undervalued by leadership. Leveraging protective factors and intervening on organizational factors attributed to burnout such as improving communication and enhancing support services may be effective in addressing the physician burnout epidemic.

Strengths and limitations of this study

- Multiple standardized focus group interviews were carried out, providing physician perspectives on specific systems issues in a hospital setting driving physicians burnout.
- Comparison and contrasting systems issues experienced by physicians that provide significant services in hospitals, the Emergency Department and General Internal Medicine.
- Physician perspectives on possible solutions to systems issues were collected that may be helpful in organizational initiatives for improving physician wellness.
- Systematic framework analysis was applied to identify themes converging from each focus group.
- Findings may not be generalized to other non-teaching hospitals or health systems or to other specialties.

INTRODUCTION

The burnout phenomenon is defined by Maslach *et al.* as a syndrome characterized by depersonalization, emotional exhaustion, and perceived low sense of accomplishment [1]. A systematic review of 33 qualitative studies on physicians' perspectives on burnout ranked stress factors contributing to burnout as first organizational, then relational, and lastly individual [2]. Organizational factors included heavy workloads, high amount of paperwork, and insufficient time for physicians to spend with their patients and to attend to their personal lives [3–5]. Relational factors referred to the conflict between professionals in decision-making. These conflicts often arise due to differences in opinion and disagreements between different departments and services. Lastly, a few studies suggested individual factors such as burden of responsibility, feelings of guilt, helplessness and doubt about abilities also contributed to physician burnout [6,7].

Increasing prevalence of physician burnout have been reported across the world, with a prevalence as high as 67% in 2022 at hospitals in Canada [8]. Burnout contributes to the physician shortages observed throughout Canada [9]. The Canadian Medical Association's national physician health survey in 2021 reported that 49% of respondents considered reducing their clinical hours in the near future, and those who experienced more burnout were more likely to express their intention to reduce clinical hours compared to physicians who did not report burnout [10]. Therefore, improving physician wellness is now a priority for health care systems. Although causes of burnout in physicians are multifactorial, organizational factors have been reported as more important than individual factors such as impaired coping skills or lack of resilience among physicians [11]. Although most wellness interventions have focused on improving individual-level factors such as physicians' personal behaviors and skills, organisational changes may contribute

to greater and more long-term improvements in wellbeing [12]. However, there are currently few published data about specific organizational factors that contribute to physician burnout [13] and few institutions have employed a comprehensive approach to tackling physician burnout [14].

Our group previously determined that at least 2/3rds of physicians working in the Emergency Department (ED) and in General Internal Medicine (GIM) experienced burnout, and systems issues were considered to be the most important factors underlying burnout [8,15]. Here, we conducted a qualitative study to identify specific systems-issues that contribute to burnout, organizational factors that are protective, and physician derived solutions. We utilized focus groups of ED and GIM physicians, as less is known on the first-hand perspective of hospital-based physicians [15,16] in comparison to general practitioners [17,18] on specific systems causes of burnout. Additionally, we previously found that ED and GIM physicians experience high rates of burnout as front-line care providers who often collaborate. We report our findings from a framework analysis of focus group interviews to develop a comprehensive understanding of burnout in hospitals.

METHODS

Study design

We used a qualitative research design with semi-structured independent focus group interviews analyzed using the Framework Method [19,20]. The consolidated criteria for reporting qualitative research (COREQ) were followed [21].

Setting, participants and recruitment

All physicians from GIM and ED groups at two tertiary care urban academic hospitals in Vancouver, British Columbia, Canada were invited to participate in the study. Given that the interviews were meant to provide a safe space for discussing organizational issues, six physician leaders were excluded from participating in the focus groups from both groups. The division of General Internal Medicine includes 55 physicians (40% women, 75% less than age 50 years), and the Department of Emergency Medicine includes 43 physicians (36% women, 68% aged less than 50 years) who work at one or both of these hospitals. Physicians were sent an initial email from physician peers within each group inviting them to participate, two reminder emails over a 6-8 week period. All physicians who agreed to participate in the focus groups were included (29/51= 57% GIM and 12/41=29% ED response rate excluding physician leaders). All physicians received remuneration for their time at standard physician remuneration rates at our hospitals.

Interview guide and focus group interviews

The interview guide was developed by a review of the literature [22,23] including drawing from the Institute for Healthcare improvement Framework for Improving Joy in Work [24], and Mayo Clinic work on organizational strategies to improve wellness [25], and content experts in physician wellness, moral distress, and qualitative research methodology from the research team. The guide was further refined with feedback and pilot tested with peer physician members from GIM and ED who later joined the project to enhance recruitment, and to improve reliability, clarity, and answerability of the guide. The interview guide asked questions on 1. Organizational factors that are perceived to drive burnout, 2. Organizational factors that bring joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout. The interview guide is included in the supplementary material (Appendix I).

There were 5 focus groups held with 6 to 13 physicians in each group (three independent GIM physicians and two ED physicians focus groups) from July 2021 to December 2022 in a staggered fashion. An experienced female facilitator (Elizabeth Stanger, MSc.) was responsible for facilitating the focus groups. The facilitator was a project manager working at the health authority in British Columbia with expertise in operations and program planning across multiple hospital-based programs and facilitation in focus groups. The facilitator was not known to the participants. A peer physician who was a member of the project team was also present at each of the focus groups. Focus groups were held virtually via the Zoom© platform during the COVID-19 pandemic. Participants provided verbal consent for the session recording at the beginning of the focus group interview. Participants were informed that quotes from the data analysis will not be linked to the individuals and no identifying information will be recorded or shared. The study

was approved by the Providence Health Care Research Ethics Board. The duration of each interview session was approximately 90 minutes. Interviews and number of focus groups were continued until no new themes emerged; this was determined by the facilitator and physician present at the session. Audio was recorded and transcribed using Otter.AI, Inc. (Mountain View, California). Transcripts were reviewed and validated by the facilitator and the peer physicians, a process through which they were de-identified and checked to ensure accurate recording and true reflection of the discussion. No repeat interviews were conducted. Transcripts and framework analyses were returned to each of the peer physicians who attended each focus group for any corrections, validation, and to ensure appropriate meaning. The identifying information of individual physicians and their expressed opinions remains confidential.

Framework analysis

Written transcripts recorded from focus group sessions were systematically analyzed using framework analysis, as described by Ritchie and Spencer [26]. The five key steps of framework analysis are data familiarization, framework identification, indexing, charting, and mapping/interpretation [27–30]. De-identified transcripts were initially reviewed thoroughly by two independent data coders and key concepts and patterns were highlighted. Reflective notes and impressions were made based on the depth and recurrence of the topics discussed. After this data familiarization step, the highlighted themes by the reviewers were cross-referenced and core themes were selected. The broad categories were defined from our research questions and the themes emerged from reviewing the transcripts. Once the themes were selected and agreed upon by the reviewers, a table was made for each of the broad categories where the rows listed the selected themes, and the columns were labelled GIM and ED. Findings from the three GIM and

two ED focus groups were compiled respectively, and differences and similarities between the GIM and ED groups were tabulated. Direct quotes from all transcripts in support of each theme were selected and assigned in corresponding cells of the tables. This organization also allowed for a more objective comparison of evidence gathered from the two groups of physicians. Lastly, interpretation of the framework matrix was done based on contributions of the entire research team through multiple revisions and impressions. Framework analysis was conducted manually. The most frequently recurring themes were reported as major themes listed in order of decreasing frequency in the tables.

Patient and public involvement

None.

RESULTS

Baseline characteristics

There was a total of 41 GIM (n=29) and ED (n=12) physicians participating in focus groups with 44% women participants (Table 1). The emerging themes from focus group interviews were organized in three major categories of 1. Organization factors that are perceived to drive burnout, 2. Organizational factors that reduce burnout by bringing joy and satisfaction to work, and 3. Actionable interventions to reduce physician's burnout.

Organizational factors that are perceived to drive burnout

Issues in the work environment, relational issues between other physician colleagues and leaders, and workload were found common themes highlighted by both GIM and ED physicians. The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 2.

Interruptions and noise

Physicians found frequent interruptions while seeing patients or arranging care plans as a major challenge that affects their workflow as well as the quality of care they can provide to patients. Physicians working in hospitals experience frequent interruptions from needing to answer calls for tests, respond to or need to make requests to nursing or other physicians and trainee questions about patients. Additionally, occupational noise exposure is found to be highly disruptive. The internal ambient noises for example can be derived from crowded spaces, equipment and acoustics of the building.

Interdepartmental conflict

Frequent disputes and disagreements between different hospital services was another major contributing theme identified. Examples include disputes over which physician or admitting service would admit patients as most responsible physician or arguments about performing tests or consultations on patients. Physicians found the time and energy spent on resolving discrepancies in opinion on consultation and admission decisions to add extra unnecessary pressures to their roles.

Heavy workload and scheduling

Heavy workload, poor working hours and conflicting schedules constituted another major theme that was frequently noted by both GIM and ED physicians. Long and poorly scheduled working hours prevent physicians from attending to their personal lives and interests. GIM physician work variable schedules with unpredictable hours which may include weekends, while ED physicians work in fixed shifts that may be scheduled during workdays, evenings, nights, weekends or holidays. ED physicians also report pressures from needing to rapidly assess, manage, and potentially discharge their case load during fixed time shifts or possibly stay late to continue caring for sick patients.

Feeling undervalued

Feeling undervalued by leadership and other consulting services was a key factor that was suggested as a contributing factor to burnout. Physicians perceived that they were not being heard by leadership as issues that they faced were not addressed.

Other less prominent themes that were found to be reported by both GIM and ED physicians included: 1. Bureaucracy and inefficiencies, 2. Non-physician roles like order entry into the

EMR or portering patients within the department, or changing bedsheets, 3. Moral distress from not being able to address the social determinants of health for marginalized populations, 4. COVID-19 global pandemic, 5. Financial structures and remuneration where physicians are asked to perform work that is either underpaid or not paid such as administrative work. All emerging themes have been summarized in Figure 1., illustrating the factors that were common to both GIM and ED specialties as well as those that were unique to each. Appendix II includes a list of all associated quotes for each of the major and minor themes.

Organizational factors that reduce burnout by bringing joy and satisfaction at work

The four major themes within this category are listed below, with corresponding key quotes from focus group interviews presented in Table 3. Appendix III includes a list of all associated quotes for each of the major and minor themes.

Feeling valued

Both GIM and ED physicians reported that feeling valued by patients, colleagues, and leaders was a major factor bringing joy to work. Physicians reported having a sense of accomplishment and meaning through skilled patient care.

Having sufficient time to build rapport with patients

This theme was reported more frequently in GIM than in ED groups. Physicians found having enough time with patients to build a connection was a one of the satisfying aspects of their job.

Collegiality

This theme was reported more frequently in ED than in GIM groups. Physicians reported that supportive work environment and positive interactions with colleagues as major factors that bring joy to their role.

Doing physicians' work

Being able to focus on physicians' work such as patient examination, interacting with patients, as opposed feeling occupied by non-physician roles such as entering orders, note-taking, portering patients or making phone calls for testing as examples was another identified theme. This theme was reported by both GIM and ED groups. Physicians found the opportunity to focus on practicing what they trained for to be another satisfying aspect of their jobs.

Actionable interventions to reduce physicians' burnout

Physicians identified a number of solutions to address the identified themes that contribute to burnout. The 26 key interventions were recommended by ED and GIM physicians for each previously described theme are presented in Table 4. Please see Appendix IV for a complete list of all suggested direct quotes.

DISCUSSION

Organizational factors are thought to underlie physician burnout especially within hospitals but there are little data identifying these specific issues especially in GIM. Our study identified four main themes among GIM and ED physicians that contributed to feelings of burnout including 1. Interruptions and noise, 2. Interdepartmental conflict, 3. Heavy workload and scheduling, and 4. Feeling undervalued. The factors that were considered protective were largely the inverse of these: 1. Feeling valued by leadership, 2. Having time to build rapport with patients, 3. Cultivating collegiality and 4. Doing physicians' work. Most organizational issues perceived by physicians were common to both groups. Physicians also identified multiple potential strategies to improve wellness.

The first objective was to identify organizational factors that are perceived to drive burnout in physicians. In-line with the systematic reviews and meta-analyses on physicians' perspective on burnout [23,22,11], we found organizational-level factors to contribute to physician burnout. Agarwal *et al.* have previously described high quantity of work, non-physician roles, and feeling undervalued by local institutions as contributing factors to burnout in primary care providers [31]. They particularly described the perception of being undervalued as being rooted in lack of boundaries in responsibilities, inadequate communication and collaboration with leadership, and insufficient acknowledgment of the challenges faced by primary care providers [31]. Heavy workload [3,5,32–38], difficult working conditions, lack of time [3,33,35,38,39] and the constant pressure to perform tasks quickly are the most commonly reported organizational contributors to burnout [11]. In a cross-sectional survey from practicing oncologists, 73% reported symptoms of burnout that was driven by working in a chaotic atmosphere, feeling unappreciated, poor control over

workload, and discomfort in discussing workplace stress with peers [40]. In our study however, themes of interruptions and noise as well as interdepartmental conflict emerged as major stressors in the workplace. This is likely because qualitative studies on physician burnout in hospital-based medicine and particularly GIM and ED specialties are less common, leaving such fixable problems unidentified and unaddressed. One of the major sources of interdepartmental conflict is the frequent disagreement between services and the pressure to admit patients while both sides are overwhelmed and are not well supported. Although practically this issue arises between individuals, it is the organizational structure and process that places physicians on opposite sides of conflicts. Lastly, the other aspect of the interruption and internal ambient noise complaint is rooted in the over-stimulating and chaotic environment in which hospital-based care providers practice in, an issue that may be less of an issue in primary care settings. With regards to sexism in the workplace, female GIM physicians reported experiencing microaggressions and intimidation from older male staff which directly contributed to their experience of burnout. Gender bias has also been reported previously as a major barrier to career satisfaction by female surgeons and recognized as a risk factor for burnout [7].

Secondly, when exploring protective factors, being rewarded and valued were emphasized by both groups equally. Previous research recognized primary care providers' feelings of being undervalued by local institutions and health care systems as a major contributor to burnout [31]. Another study also identified lack of recognition as a contributor to burnout amongst physicians in French hospitals [41]. Interestingly, having time to build rapport with patients and reducing interruptions were more frequently suggested as protective factors by GIM physicians compared to their ED colleagues. GIM physicians often discussed having time to connect with patients and

improving the quality of that time by reducing interruptions as factors that bring satisfaction to their jobs. Meaningful physician-patient relationships had previously been described as a protective factor against burnout in family physicians, including major themes of patient-centered care, continuity, effective care, trust, and purpose [18]. During the COVID-19 global pandemic, creating such meaningful relationships was further hindered by the widespread use of telehealth and reduced patient time [17]. However, most studies were focused on family physicians and to our knowledge, these pertinent protective factors have not been previously reported from hospital-based providers. On the other hand, the last two identified factors of cultivating staff collegiality and doing physicians' work were more heavily emphasized by ED physicians. They found positive interactions with the staff, interesting cases, and good medicine as key factors that bring joy and satisfaction to their otherwise demanding roles. The concept of collegiality, teamwork, and fostering community amongst physicians as an effective way to protect against burnout has also been reported previously [7,31,42,43]. Although at face value collegiality may appear to be an individual-level factor, evidence suggests that organizational modifications are most influential in cultivating a satisfying and joyful environment for physicians. A recent qualitative study of job and life satisfaction amongst ED physicians suggests that regardless of physicians' self-identification as introverted or extroverted personalities, those with better job satisfaction tended to be more socially connected [44]. Overall, although protective factors that bring joy and satisfaction to physicians are often overlapping, it is important to consider the speciality-specific factors and to strengthen protective factors that are intertwined with the nature of each speciality. Moreover, augmenting areas where physicians find value in their roles and incorporating their perspective in organizational-level decision makings are fundamental in building resiliency against burnout.

Few previous studies have sought the perspective of the practicing physicians on interventions to prevent burnout. Additionally, few institutions have employed a comprehensive approach to tackle physician burnout as an organizational priority [14]. Lack of physician input into interventions to improve wellness may also underlie the lack of physician engagement in wellness interventions. Broad recommendations such as reducing and also compensating physicians for the time they spend documenting in the electronic medical record (EMR), expanding support staff, and increasing positivity and collegiality have been described to improve the well-being of health care providers [42]. Others suggested a cultural change from stigmatization and competitiveness to compassion and collaboration, starting from medical school training [45]. Primary care physicians also recommended solutions in another qualitative study around the general themes of fostering community amongst colleagues, advocating for reforms beyond institutions, promoting the primary care providers' voice, and recalibrating expectations and reimbursement levels [31]. In this study, we sought specific solutions from physicians, leading to a list of 26 actionable recommendations to be implemented (Table 4). As supported by the literature, we believe that direct discussions through similar repeated focus groups and ongoing facilitated peer support sessions [46] with input from physicians are fundamental to identifying contributors to burnout. To address the root causes at an institutional level, Shanafelt et al. proposed four fundamental components of promoting foundational programs, cultural transformation, rapid iterative experimentation, and sustainability [25,47]. Future studies should also integrate qualitative interview findings from physicians and operations leaders, and late career physicians, to comprehensively address the organizational factors driving burnout.

Although several informative themes have emerged from this study, our findings are not without limitations. One of the limitations is that while our study provided rich information on organizational factors in the ED and GIM at two urban tertiary care academic hospitals, our findings may not be generalized to hospitals, departments or health care models or specialties different from those under study as organizational issues may reflect local environments, available resources, and the patient populations. However, it is likely that the highlighted issues are common and would resonate with other groups and urban hospitals. Secondly, given the qualitative nature of the study, it is challenging to assign value to each of the themes identified from focus groups or individuals within each group. Even though most themes were selected because they were more frequently mentioned, it is unclear which organizational factor contributes the most to burnout and ultimately, which intervention would be most effective in reducing burnout. Thirdly, physician leaders were excluded from participating in the focus groups in order to provide a safe space for discussing organization issues, and the peer physician involved in the development of the interview guide also participated in the focus groups to ensure its adequacy. It should be noted that leaders may have additional perspectives on organizational issues [48]. There are also demographic limitations that should be considered including the relatively small sample size, discrepancies in the number of participants in each of the groups, and the fact that the majority of the participants were younger than 50 years old. Additionally, burnout was not objectively evaluated for each participating physician in this study, and the focus group participants may have had varying levels of prior or ongoing experience with burnout. Lastly, although the vast majority of challenges reported in the focus groups appeared to precede the global pandemic, it must be noted that the interviews were conducted during the pandemic. Nonetheless, identifying contributing factors to burnout during

or prior to the pandemic are crucial and physician burnout is likely an overlooked issue that was particularly brought to attention during the COVID-19 pandemic.

CONCLUSION

Organizational issues that contribute to high rates of burnout in frontline physicians in hospitals include interruptions and noise, interdepartmental conflict, heavy workload, and feeling undervalued by leadership. Most of these contributing factors to burnout are resolvable, many of which can be addressed at low cost. Achieving wellness for health care providers must be a priority focus for health care systems, and organizational change is an important path to improving wellness.

ETHICS STATEMENT: This study was approved by the Providence Health Research Ethics boards H018-02999.

FUNDING: Providence Health Care Medical Staff Association.

COMPETING INTERESTS: There are no competing interests for any author.

CONTRIBUTORS: NAK, AP, PD, HL, DL, ES, AS contributed to the design of the study. NAK, ES, DR, ER, VV, KR, AS, AP, AT and DL contributed to data collection and FG, ES and NAK contributed towards analysis. All authors contributed to interpretation of the results, and meaningful contribution to writing and accepting the final manuscript. NAK had full access to all the data in the study and is responsible for the overall content as guarantor.

DATA AVAILABILITY STATEMENT: Statistical code and dataset available upon request from the corresponding author.

REFERENCES

1. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113. doi:10.1002/JOB.4030020205

2. Kurzthaler I, Kemmler G, Holzner B, Hofer A. Physician's Burnout and the COVID-19 Pandemic—A Nationwide Cross-Sectional Study in Austria. *Front Psychiatry*. 2021;12:784131. doi:10.3389/FPSYT.2021.784131/FULL

3. Hasbrouck MA, Waddimba AC. The work-related stressors and coping strategies of group-employed rural health care practitioners: A qualitative study. *Am J Ind Med*. 2017;60(10):867-878. doi:10.1002/ajim.22753

4. Trockel M, Bohman B, Lesure E, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018;42(1):11-24. doi:10.1007/s40596-017-0849-3

5. Franz CE, Barker JC, Kim K, et al. When help becomes a hindrance: Mental health referral systems as barriers to care for primary care physicians treating patients with Alzheimer's disease. *Am J Geriatr Psychiatry Off J Am Assoc Geriatr Psychiatry*. 2010;18(7):576-585.

6. Prentice S, Elliott T, Dorstyn D, Benson J. Burnout, wellbeing and how they relate: A qualitative study in general practice trainees. *Med Educ*. 2023;57(3):243-255. doi:10.1111/MEDU.14931

7. Lu PW, Columbus AB, Fields AC, Melnitchouk N, Cho NL. Gender Differences in Surgeon Burnout and Barriers to Career Satisfaction: A Qualitative Exploration. *J Surg Res*. 2020;247:28-33. doi:10.1016/J.JSS.2019.10.045

8. Khan N, Palepu A, Dodek P, et al. Cross-sectional survey on physician burnout during the COVID-19 pandemic in Vancouver, Canada: the role of gender, ethnicity and sexual orientation. *BMJ Open*. 2021;11(5):e050380. doi:10.1136/BMJOPEN-2021-050380

9. Li K, Frumkin A, Bi WG, Magrill J, Newton C. Biopsy of Canada's family physician shortage. *Fam Med Community Health*. 2023;11(2):e002236. doi:10.1136/fmch-2023-002236

10. Physician wellness: New 2021 National Physician Health Survey findings — burnout, short-staffing and an overburdened system take their toll. Canadian Medical Association. Accessed November 25, 2023. https://www.cma.ca/physician-wellness-hub/content/physician-wellness-new-2021-national-physician-health-survey

11. Sibeoni J, Bellon-Champel L, Mousty A, Manolios E, Verneuil L, Revah-Levy A. Physicians' Perspectives About Burnout: a Systematic Review and Metasynthesis. *J Gen Intern Med*. 2019;34(8):1578-1590. doi:10.1007/s11606-019-05062-y

12. Fox KE, Johnson ST, Berkman LF, et al. Organisational- and group-level workplace interventions and their effect on multiple domains of worker well-being: A systematic review. *Work Stress*. 2022;36(1):30-59. doi:10.1080/02678373.2021.1969476

13. Cohen C, Pignata S, Bezak E, Tie M, Childs J. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ Open*. 2023;13(6):e071203. doi:10.1136/bmjopen-2022-071203

14. Longo BA, Schmaltz SP, Williams SC, Shanafelt TD, Sinsky CA, Baker DW. Clinician Well-Being Assessment and Interventions in Joint Commission-Accredited Hospitals and Federally Qualified Health Centers. *Jt Comm J Qual Patient Saf*. 2023;49(10):511-520. doi:10.1016/j.jcjq.2023.04.007

15. Ghaseminejad F, Rich KE, Rosenbaum D, et al. Differences in Physician Burnout by Specialty: A Cross-Sectional Survey. *Perm J*. 2024;28(3):58-68. doi:10.7812/TPP/24.040

16. Baugh JJ, Raja AS, Takayesu JK. Help Us Help You: Engaging Emergency Physicians to Identify Organizational Strategies to Reduce Burnout. *West J Emerg Med*. 2021;22(3):696-701. doi:10.5811/westjem.2020.49180

17. LeSage C. Physician Burnout and the COVID-19 Pandemic: An Analysis of U.S. Primary Care Physicians. *Honors Theses*. Published online June 1, 2022. Accessed May 19, 2023. https://digitalworks.union.edu/theses/2580

18. Hiefner AR, Constable P, Ross K, Sepdham D, Ventimiglia JB. Protecting Family Physicians from Burnout: Meaningful Patient-Physician Relationships Are "More than Just Medicine." *J Am Board Fam Med JABFM*. 2022;35(4):716-723. doi:10.3122/JABFM.2022.04.210441

19. EBSCOhost | 151054114 | Using Framework Analysis in Applied Qualitative Research. Accessed November 25, 2023. https://web.s.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=craw

ler&jrnl=10520147&AN=151054114&h=lF6swakenz5iiW6eYrJ2M5oI2tSJMkeAK0bO9u4PTjxgJcgfluUL8JOx8NtXzYqWR5i%2fdHSNktTjH7MMulpiuA%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d10520147%26AN%3d151054114

20. Kiernan MD, Hill M. Framework analysis: a whole paradigm approach. *Qual Res J*. 2018;18(3):248-261. doi:10.1108/QRJ-D-17-00008

21. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-357. doi:10.1093/intqhc/mzm042

22. Panagioti M, Panagopoulou E, Bower P, et al. Controlled Interventions to Reduce Burnout in Physicians: A Systematic Review and Meta-analysis. *JAMA Intern Med*. 2017;177(2):195-205. doi:10.1001/jamainternmed.2016.7674

23. Cp W, Ln D, Pj E, Td S. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *Lancet Lond Engl*. 2016;388(10057). doi:10.1016/S0140-6736(16)31279-X

24. Improvement Area: Workforce Well-Being and Joy in Work | Institute for Healthcare Improvement. Accessed October 11, 2024. https://www.ihi.org/improvement-areas/improvement-area-workforce-well-being-and-joy-work

25. Shanafelt TD, Noseworthy JH. Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout. *Mayo Clin Proc*. 2017;92(1):129-146. doi:10.1016/j.mayocp.2016.10.004

26. Ritchie J, Lewis J, Lewis P of SPJ, Nicholls CM, Ormston R. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE; 2013.

27. Goldsmith L. Using Framework Analysis in Applied Qualitative Research. *Qual Rep*. Published online June 20, 2021. doi:10.46743/2160-3715/2021.5011

28. Hackett A, Strickland K. Using the framework approach to analyse qualitative data: a worked example. *Nurse Res*. 2019;26(2):8-13. doi:10.7748/nr.2018.e1580

29. Parkinson S, Eatough V, Holmes J, Stapley E, Midgley N. Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qual Res Psychol*. 2016;13(2):109-129. doi:10.1080/14780887.2015.1119228

30. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13(1):117. doi:10.1186/1471-2288-13-117

31. Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional Dissonance and Burnout in Primary Care: A Qualitative Study. *JAMA Intern Med*. 2020;180(3):395-401. doi:10.1001/JAMAINTERNMED.2019.6326

32. Sibeoni J, Orri M, Valentin M, et al. Metasynthesis of the Views about Treatment of Anorexia Nervosa in Adolescents: Perspectives of Adolescents, Parents, and Professionals. *PLoS ONE*. 2017;12(1):e0169493. doi:10.1371/journal.pone.0169493

33. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of qualitative literature: Lessons learnt. *BMC Med Res Methodol*. 2008;8:21. doi:10.1186/1471-2288-8-21

34. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol*. 2012;12:181. doi:10.1186/1471-2288-12-181

35. Chenail RJ. Learning to Appraise the Quality of Qualitative Research Articles: A Contextualized Learning Object for Constructing Knowledge. *Qual Rep*. 2011;16(1):236-248.

36. Petek D, Gajsek T, Petek Ster M. Work-family balance by women GP specialist trainees in Slovenia: a qualitative study. *BMC Med Educ*. 2016;16:31. doi:10.1186/s12909-016-0551-2

37. Beng TS, Chin LE, Guan NC, et al. The experiences of stress of palliative care providers in Malaysia: a thematic analysis. *Am J Hosp Palliat Care*. 2015;32(1):15-28. doi:10.1177/1049909113503395

38. Çiçeklioğlu M, Öcek ZA, Turk M, Taner Ş. The influence of a market-oriented primary care reform on family physicians' working conditions: A qualitative study in Turkey. *Eur J Gen Pract*. 2015;21(2):97-102. doi:10.3109/13814788.2014.966075

39. McGowan Y, Humphries N, Burke H, Conry M, Morgan K. Through doctors' eyes: a qualitative study of hospital doctor perspectives on their working conditions. *Br J Health Psychol*. 2013;18(4):874-891. doi:10.1111/bjhp.12037

40. Singh S, Farrelly A, Chan C, et al. Prevalence and Workplace Drivers of Burnout in Cancer Care Physicians in Ontario, Canada. *JCO Oncol Pract*. 2022;18(1):e60-e71. doi:10.1200/OP.21.00170

41. Sibeoni J, Bellon-Champel L, Verneuil L, Siaugues C, Revah-Levy A, Farges O. Workplace environment around physicians' burnout: A qualitative study in French hospitals. *Scand J Work Environ Health*. 2021;47(7):521. doi:10.5271/SJWEH.3977

42. Dillon EC, Tai-Seale M, Meehan A, et al. Frontline Perspectives on Physician Burnout and Strategies to Improve Well-Being: Interviews with Physicians and Health System Leaders. *J Gen Intern Med*. 2020;35(1):261-267. doi:10.1007/S11606-019-05381-0/TABLES/2

43. Makowski MS, Trockel M, Paganoni S, et al. Occupational Characteristics Associated With Professional Fulfillment and Burnout Among US Physiatrists. *Am J Phys Med Rehabil*. 2023;102(5):379-388. doi:10.1097/PHM.0000000000002216

44. Kase J, Doolittle B. Job and life satisfaction among emergency physicians: A qualitative study. *PLOS ONE*. 2023;18(2):e0279425. doi:10.1371/JOURNAL.PONE.0279425

45. Walsh G, Hayes B, Freeney Y, McArdle S. Doctor, how can we help you? Qualitative interview study to identify key interventions to target burnout in hospital doctors. *BMJ Open*. 2019;9(9):e030209. doi:10.1136/BMJOPEN-2019-030209

46. Schwartz R, Shanafelt TD, Gimmler C, Osterberg L. Developing institutional infrastructure for physician wellness: qualitative Insights from VA physicians. *BMC Health Serv Res*. 2020;20(1):7. doi:10.1186/s12913-019-4783-9

47. Shanafelt T, Stolz S, Springer J, Murphy D, Bohman B, Trockel M. A Blueprint for Organizational Strategies To Promote the Well-being of Health Care Professionals. *NEJM Catal*. 2020;1(6). doi:10.1056/CAT.20.0266

48. Mitton C, Peacock S, Storch J, Smith N, Cornelissen E. Moral distress among health system managers: exploratory research in two British Columbia health authorities. *Health Care Anal HCA J Health Philos Policy*. 2011;19(2):107-121. doi:10.1007/s10728-010-0145-9

Table 1. Focus group participants demographics by hospital

Demographic	GIM Hospital 1 (n=16)	GIM Hospital 2 (n=13)	ED FG1 Hospital 1 (n=12)
Age years			
35-49	15	12	8
>50	1	1	4
Sex			
Woman	6	6	6
Man	10	7	6

Table 2. Major emerging themes and associated key quotes for organizational factors that drive burnout

Major Theme	Key Quotes
1. Interruptions and noise	• Ex 1. *"The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value."* (GIM) • Ex 2. "*The other thing that has been a real pebble in my shoe lately is […] in terms of electronic devices and telephones in the hospital […]. In the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and here in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time, watching videos without headphones. And it's very disruptive."* (ED)
2. Interdepartmental conflict	• Ex 1. *"You are fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner."* (GIM) • Ex 2. *"One area that I still fear, and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because in internal medicine, we have such a broad mandate"* (GIM)

	• Ex 3. *"I know the person that just checked in with an eye problem at 11pm, they might get seen at 10 in the morning… it is so discouraging to go into there."* (ED)
3. Heavy workload and scheduling	• Ex 1. *"I think weekends are some of the worst times for faculty… We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team… and then you're often on call that night, then have to be back the next morning. So, I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week."* (GIM) • Ex 2. *"There's no such thing as a daycare that opens up at 7:00 [which] rules out a lot of dual physician family and or people with a kid in daycare and a partner… it makes life extremely more difficult. When really, we don't need to be there at 7:30 for patient care."* (GIM) • Ex 3. *"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly"* (ED)
4. Feeling undervalued	• Ex 1. *"Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes… on top of that you have to care for and role model for residents and medical students… and I don't think it's valued or recognized by the organization."* (GIM) • Ex 2. *"I do think our time isn't always valued by some of the consultants."* (ED)

Table 3. Major emerging themes and associated key quotes for organizational factors that reduce burnout by bringing joy and satisfaction at work

Major Theme	Key Quotes
1. Feeling valued	• Ex 1. *"[knowing that] you're a valued member of the organization, that if you if you left, you would be missed… [and] you're rewarded for bringing value to the organization"* (ED) • Ex 2. *"It's good to feel like you could make a difference in a patient population… [and] when my skill sets are valued."* (GIM)
2. Having sufficient time to build rapport with patients	• Ex. 1. *"The sense of connection that I had to the patient and the gratitude that this patient expressed [was what I found] satisfying."* (GIM) • Ex. 2. *"Having a patient actually know who I am and remember who I was, it was just incredible."* (GIM)
3. Collegiality	• Ex 1. *"Just the interaction I got with all the staff and the collegiality… everyone is friendly, smiling, and helpful."* (ED) • Ex. 2. *"Colleagues that you can trust and turn to bounce things off of"*. (ED)
4. Doing physicians' work	• Ex. 1. *"When someone's sick… [doing] something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day."* (ED)

	• Ex 2. *"Sense of getting to use my skills and training to help this person"* (GIM)

Table 4. All 26 key actionable interventions suggested by GIM and ED physicians to reduce burnout, listed in correspondence to the emerging themes

Theme	Suggested intervention
Interruptions and noise	1. *"We need to alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office or at the dermatologists."* (ED)
Heavy workload and scheduling	2. *"A communication app, where individuals would sign-in to their role in the hospital every given day"* (GIM) 3. *"Having a hospitalist to help with the load"* (GIM) 4. *"A way to redirect phone calls so that they're batched or prioritized."* (GIM) 5. *"Flexibility in scheduling… having locums to take unwanted call shifts/weekends"* (GIM) 6. *"Post-call days or wellness days"* (GIM) 7. *"Rather than us calling five different [people] there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low-lying fruit that is contributing to our burnout, for sure."* (ED)
Interdepartmental conflict	8. *"Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can*

	actually work with them instead of always working against them […] like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay." (GIM) 9. *"Cultural change within surgical services […] more buy in from higher ups in terms of surgical services, like accepting the actual surgical issues […] it would be nice for the surgical services to take ownership of their patient."* (GIM) 10. *"Defining boundaries of our specialty (i.e., admission criteria)"* (GIM) 11. *"Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care."* (GIM) 12. *"Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER."* (GIM) 13. *"Culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."* (ED)
Bureaucracy and inefficiencies	14. *"More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders."* (GIM) 15. *"Reducing the amount of administration with order entry with Cerner."* (GIM)
Non-physician roles	16. *"Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker, housecleaners, porters)"* (GIM and ED) 17. *"Have a chronic clinical associate or like nurse practitioner on each team."* (GIM) 18. *"Workforce planning and hiring enough people for the future."* (GIM) 19. *"Have people ED to help [patients] fill out the paperwork for housing, get them better clothes, get them better food."* (ED) 20. *"A social/behavioural ICU"* (ED)
Patient Experience in the Waiting room	21. *"Having a quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."* (GIM) 22. *"Waiting room better staffed, maybe with someone who's looking after these patients, watching out for, you know, signs of people escalating, people becoming more violent."* (ED)

Financial structures and remuneration	23. *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied… So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load."* (GIM) 24. *"Improving remuneration to attract fellows to live/work in Vancouver."* (GIM)
Violence against physicians	25. *"Physical barriers to actually protect [physicians]."* (ED) 26. *"Offsite opiate overdose [and] sobering units"* (ED)

FIGURE LEGEND

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

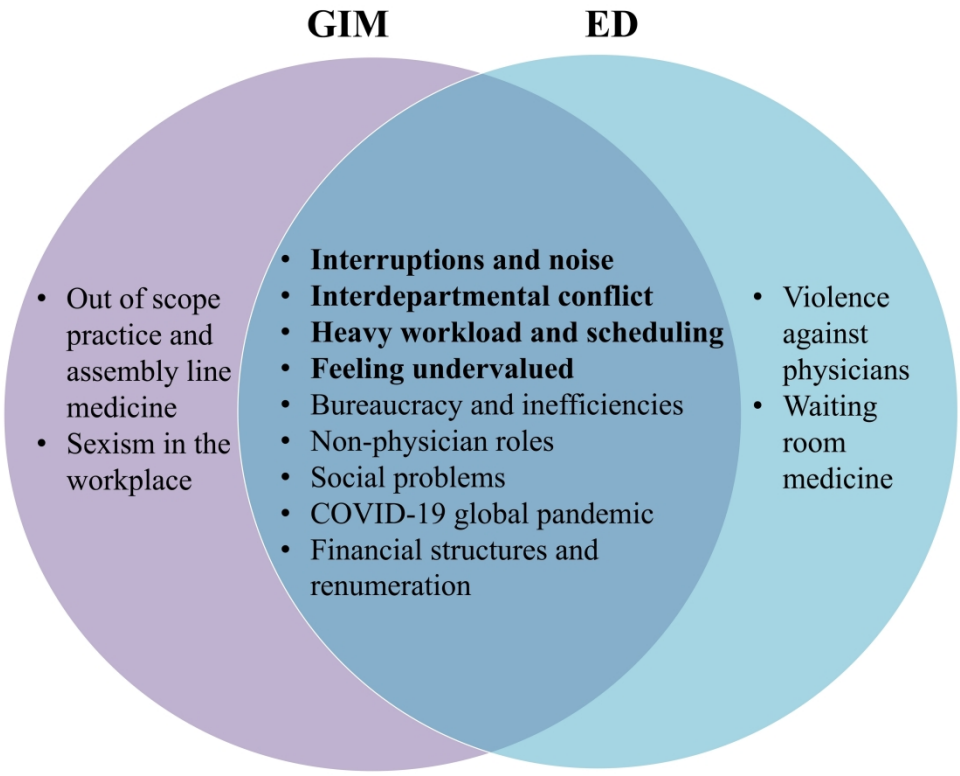

Figure 1. Organizational factors that are perceived to drive burnout as reported by GIM and ED physicians. The four major common themes are listed in bold.

500x475mm (300 x 300 DPI)

APPENDIX I

Semi-Structured Focus Group Questions

Preamble for participants:

Thank you for taking the time to participate in this focus group. I would like to first explain how this focus group will take place. My name is XXX and I am a XXX doing a research study on system-level sources of workplace burnout.

We recently conducted a survey on burnout in the Department of Medicine and identified several important things. First, the majority of physicians are experiencing burnout right now. Second, almost 40% of physicians struggle with work-life conflict. And third, members rated reducing work inefficiencies and non-physician clerical work as *the most important* strategies to reducing burnout.

So, the purpose of this focus group is to try to identify those aspects of work including the work inefficiencies and the non-clerical work that contribute to burnout in your {division/department}. We would like to understand your thoughts on what are the system level factors that are challenging and that cause burnout feelings for you and others in your group and what are your thoughts on the potential solutions to these system level factors.

Our discussion should take about 60-90 minutes. With your approval, this session will be audio-recorded and notes will be taken during the session by a facilitator, for analysis later. No personal identifiers will be linked to the recording or the notes—only a code, which is known only to the research coordinator. We may use direct quotes of things you say in the focus group in reports of research findings. If your quotes are used, your name will not be linked to them, nor will any information that would identify any person. We would also like to remind all participants that the information shared today should be treated as confidential and not shared outside of this room.

Please feel free to answer our questions based on your ideas about this topic, or by thinking of examples from your own experiences, or those of your colleagues. There are no right or wrong answers.

Semi-structured focus group questions:

What matters most to physicians at work

1. Before we start talking about the sources of burnout, we want to understand, what matters to you at work? What brings job satisfaction? What creates pride in the organization? What does it look like when we're at our best?

Organizational/work based sources of burnout

2. What are the specific frustrations, impediments or things at work that get in the way of attaining what matters most to you at work.

Probe: What are the pebbles in your shoes? The processes, issues or circumstances that, if we could only deal with them, it would make it so much easier for you to do what you really want to do when you practice medicine.

Probe: What are the frustrations or impediments at work that get in the way of your work life balance?

Organizational/work based Solutions to Burnout

3. Thinking to the pebbles in your shoes, what are some strategies that would help you get to what matters most to you when taking care of patients?

Probe: What are some strategies that would help you achieve better work life balance?

Probe: What could division heads, department heads and hospital leadership do?

APPENDIX II

Category I: Contributing Factors to Burnout

Theme	GIM	ED
Feeling undervalued	- "Leadership, they don't value what I bring to the table, I'm told to do whatever it is, my own leadership in my own department doesn't stand up for me or doesn't seem like they stand up for me because nothing ever changes." - "Our time and our efforts are less valuable than other doctors in the hospital." - "On top of that you have to care for and role model for residents and medical students…and I don't think it's valued or recognized by the organization." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore."	- *"I do think our time isn't always valued by some of the consultants."
Workload and scheduling	- "Relationship building with the patient and really showing them that we care about them seems to disappear and the exhaustion of the workload and day to day things that I'm now responsible for… the whole process has become very distant and almost impersonal." - "I could work the same number of hours on a different rotation, and I could function I can even have like, personal life after hours. care for my kids but the CTU I can't."	"Definitely feeling pressed for time in a number of different ways…one because of the demand to move patients quickly."

	- "One is all the calling and the figuring out about scheduling for patients, when they're going to have their scope, when they're going to have their surgery when a surgical service is going to see them, can I get in touch with a surgical service?" - "The sheer number of patients" - "Holding the front and making sure nobody dies until the next day without really having much time to think about the active issues or if an interesting case has been admitted." - "Hard to establish that that relationship, but at the same time, you're trying to get them out of hospital as soon as you can, when a lot of them don't want to." - "There's no such thing as a daycare that opens up at seven. And so you basically, rules out a lot of dual physician family and or people as a kid in daycare and a partner like it makes life extremely more difficult. When really we don't need to be there at 730 for patient care." - *"When you think about your job, as a teacher, your job as a physician, and then also you're kind of having to always engage with the emergency department and deal with what's coming, coming in to see to you, it's almost like you've got three jobs that you're trying to do. And then given the complexity, the social complexity of the patients that you're that you're working with…"	

	- "Sometimes when you're just too busy, I find sometimes like, I don't really get that fulfilment from patient interactions, like, it's nice to have that time to, like, be present and, you know, get something personally out of that interaction as well." - "I think coming back to our structure and function on the CTU, I think weekends are some of the worst times for faculty. We're here on the weekends, we are expected to round on the weekends when we're there. We typically are not assigned residents… you're taking in reviews from two other teams from the night before managing your whole team. So I think weekends are pretty brutal. And then you're often on call that night, then have to be back the next morning. So I think weekends are a major source of burnout or stress for the attendings. Because we don't have another person to help us yet we're carrying actually more responsibility on weekends than we do during the rest of the week." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right." - "I think it's interesting how it's pretty consistent all across the board whether or not you know,	

	we're single, or have a partner or have a dog or kids, I think everybody's life is on hold. I think it affects people differently. I have three kids. And, yeah, and my husband's also in medicine. So it's very, very chaotic. And when I'm on service, I feel like, I feel like, I take a deep breath and go under water for like two weeks, and then come out the other end and mess up everything, many times. dinners, games, extracurriculars for the kids all the weekend stuff, family stuff, it's tough, it's really tough. I had to do less call, I have to give away as much of it as possible or take on less weekend work. " - "Just want to emphasize that phrase that life gets put on hold when you're on service. Because that's, I think, is a very abnormal way of working. You know, everybody else has, you know, a balance where they work and they have their life… like I don't answer my emails, I don't clean my home, I like don't eat well, I don't exercise. And then I try and make up for it on my like week off, which, again, it's not, it's not necessarily the best way to live." - "And that's partially due to agency and lack of control over what we do and do not do. But if you can't take a minute to think through things really thoughtfully. We're internist, we like to think so that's a big part of what we do, or I think wellness, for me."	

Out of scope practice and assembly line medicine	- "We're asked to look after patients that are sort of outside of the range of expertise that we were actually trained in (i.e., trauma patients)." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex." - "I have lots of institutional pressure that's coming at me to move people through and be efficient." - "You kind of get reduced to like a mechanical check, check, check. And on to the next one, like, I find, I really don't get that fulfilment, from, you know, the interaction as much as it should be anyways."	
Interruptions and noise	- "I get woken up, and I have to like deal with some, you know, something like that we're fighting back or disposition issue, like, I can't go back to sleep for a while." - "The number of times my phone rings in a day and the number of thoughts that gets interrupted and conversations that get interrupted, that I that is really something that takes energy away from me rather than giving value." - "The Emerg doc at the 11th takes five minutes to interrupt my review with the patients who present this patient, the residents which you know, whatever, but then we say, well, this patient would be	- "An overhead paging system that really sometimes just interrupts you so many times that it interrupts your train of thought." - "The other thing that has been a real pebble in my shoe lately is the fact that in terms of electronic devices and telephones in the hospital, yes, I find where you know, in the bank, in the restaurant, ordering a coffee, going shopping, you're not on your phone, speaking loudly on FaceTime, or watching a video and hear in a crowded emergency in a stretcher next to a stretcher where I'm trying to take a history, people are doing face time watching

	more appropriate with psychiatry." - "So it's not like you're always standing at a computer where you can enter an order. So you can't you're interrupted, to put in something instead of just saying, Can you give them whatever? And then saying yes, no problem. You have to then interrupt whatever you're doing, go find a computer and do it before you forget, because it's one of 1000 interruptions that has happened in that last hour." - *"It's very frustrating having to deal with all the noise issue..." - "I think one of the strongest visceral reactions I have is when I am distracted in the middle of doing something that I think is important like reviewing it case with a resident or learner. And we're sort of deep in thought and we're having a good time kind of discussing some of the interesting aspects of a case. And then to be pulled away from that by a phone call, or, you know, a nurse coming by and, and just demanding kind of your attention, when you really were kind of in a flow state. And it's hard to have a sustained flow state in the hospital setting, I get it, it's an acute place. But I certainly think there are better ways of managing the distractions and triaging the distractions so that it's not all the time always."	videos without headphones. And it's very disruptive." - "When you dictate and somebody else dictates next to you, they will dictate into your system. So you actually have to like because it's so loud." - "Definitely feeling pressed for time in a number of different ways. One because of the constant interruptions…"
Bureaucracy and inefficiencies	- "Battling the bureaucracy, so to speak, bushwhacking through	- "Some of the technical issues, like having to log in to

	the bureaucracy just to get basic patient care completed."	different systems, I guess you have to log into Paris separately from logging into Cerner." - Dictaphones breaking - Cerner freezing - Broken equipment
Interdepartmental conflict	- *"It's very frustrating having to deal with … the politics and fighting with different services." - "Talking to eight different surgeons to find out somebody who's willing to look after this patient." - "It's hard for me to understand why the opinion of every other consultant in the hospital is more important than my opinion as an internist." - "You're fighting with your specialist colleagues, you're having to nag people to do their job, get the tests done. Make sure that the procedures are completed in a timely manner." - "One area that I still fear and hate is when you're on call, and then you get pulled into a turf war. Right? You get the patient that bounces no one wants, and you're really getting pressure to admit, because internal medicine, we have such a broad mandate, there's almost nothing we can't manage short of cutting someone open. Right? Many of these cases, we don't offer much. And the fact that everyone else has the ability to refuse a case and we don't, we are then expected to see the case. This is particularly made worse when	- *"I do think our time isn't always valued by some of the consultants." - "One of the things would be the fact that for a lot of our consultants, the day ends at about 430. And everything, held overnight, which means, you know, we're managing complex elderly patients." - "But I know the person that just checked in with an eye problem at 11pm. They might get seen at 10 in the morning, like literally, he says it is so discouraging to go into there.

	our trainees are facing really heavy loads in the emergency department." - "It takes up so much more of your time to try and deflect a consult and a fight back and to push against the system, that the path of least resistance is often just doing the work and admitting the patient. And you have to decide in that moment, are you going to engage? Or are you not going to engage?" - "I always ask what is the best thing for the patient, right? But at the same time, you don't want to reward the system for handing us crap, right? And so I feel that real problem, that tension and like I said, most times I tell the team just take it because I still think we in the end probably are the best person, but it still feels like we've been abused a little bit, right?" - "You know, one of the big issues that the hospital has dealt with, and our department in particular has dealt with for quite a few number of years, is this pay for performance of the emergency department, which basically forces the department to push patients towards any admitting service. And since internal medicine is the greatest service in the world, that can take care of everyone, we are usually the default when no other service is willing to take patients, because they are either too complex or too sick, or, you know, they are too multi system, or, you know, they're too young. There's been	

	instances where patients are not adequately evaluated, or worked up and then just deflected or deferred to Internal Medicine Service to do their job, because they feel the pressure to push them along, because they get paid more, you know, that that department makes more money for their activities. So it's a way and it doesn't benefit us in any way, except just adds to our stress - "Like the number of times where I've just been pushed to admit somebody that I'm not done assessing or just maybe needs a few hours in the ER and could avoid being admitted, is incredible. And that it just it defeats logic. Sometimes, it's just simply like, 'Get out of my Emerg I don't care if the patient only needs two more hours.' You know. it's actually really an important part of something small, that could be fixed that would add a lot of positivity to our quality of life"	
Social problems	- "I think part of the problem is that people don't have to be as accountable with some of our individuals who cannot advocate for themselves." - *"IM doctors are not able to solve their problems - housing problem or an addiction problem." - *"That's not internal medicine complex. That's just socially complex."	- "Sometimes people come in, because they're hungry, or because they want a cheese sandwich or a blanket or something. And even though I know they need that, for me, it doesn't give me a sense of satisfaction at the end of the day, as opposed to having someone who's medically ill."
Non-physician roles	- "We need to move patients, we need to make room, we need to	- "I'm constantly coming up against logistical barriers, like

	have ways to discharge people. And so that's what makes it like a s to me, because I'm just the manager, you know, I'm, I'm not practicing medicine at that point." - "… you're also kind of playing social worker at the same time."	I can't find the patient, I have to change the bed myself. There's no nurse to help." - "Portering, changing sheets, cleaning up garbage. Other things I've heard are things like doing nursing assessments, because there's maybe not enough time, even for the nurse to do an assessment." - "Having to run around and find the patient, changing your own sheets cleaning up through, you know, cleaning up the bay or the room for the patient." - "Having to bring them into a stretcher that is messily made by me with garbage on the floor that I've tried to clean up but haven't had time to clean up completely." - *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."
Violence Risk		- "I have seen a bit more agitated patients that are placing staff at risk - like we're just held to the standards, it's versus we don't have a system in place to make us feel safe to assess that patient." - "Biggest thing that is not working is our approach to violence in the emergency department."
Waiting room medicine		- "We do have a problem with the triage and because we don't have enough physical

		space to put patients into beds, so sometimes the triage is quite questionable. So for example, suicidal patients put in the waiting room." - "a care space that is not appropriate for their illness, and then have to ask them to go back to a waiting room full of people who are maybe intoxicated or experiencing other illnesses and maybe not an appropriate space for them." - "There's literally not a single space where you can assess a patient. So it's like, how are we supposed to be to our job if we don't have spaces to assess patients" - "Patients have no privacy. There's nowhere to examine them. There's nowhere to address them."
COVID-19 pandemic effect	- "And I'm hearing like, we may be asked to even offer more because we were able to take COVID like a champ. That worries me… like we could burn out and we can become more and more inclusive of what we're doing and not have our boundaries and not be a specialty anymore. So as we do restructuring, as we talk about our capacity to take care of our patients, we also have to talk about our, our skill set, what our, what our boundaries are. "	- "We in the emergency have piled on risk upon us, like we are facing more risk than we did in the past. And I just, that became very obvious to me in the pandemic."
Sexism in the workplace	- "This may not be a very popular thing to say. But I think sexism does still exist to in the workplace... But as a woman, I think there are	

	potentially more opportunities to get frustrated because of the way you might be treated, or the nurses not respecting your authority as much as your white male colleague, for example, or pushback you get on the phone. So I think that might also play into kind of wearing down faster." - "Ya, like [they] said, I definitely see a difference in the workplace in the way my female colleagues are treated than how I'm treated from other physicians. Definitely from nursing staff and allied health. And so I think that that It has to contribute to how people end up experiencing burnout." - "I would also echo that there's a lot of intimidation from surgeons, male, older, towards female physicians. And it might not be very, it's not like very discreet necessarily. It's just, it's kind of like microaggressions. And, yeah, it's definitely there."	
Financial structures and remuneration	- "And so that struggle between how much should we make for the work versus how much work is reasonable for us to do at once? I think is really is really tough… But I think that that tension is really hard to get away from. And, and it always feels like oh, if I just see one more, or if I stay a little bit longer tonight than I can make a bit more of it. But a lot of that doesn't lead to good care and doesn't lead to us feeling healthy."	- *"There's no money for overtime nursing. There's no money to call in an extra nurse, there's no money. And so I feel bad for our nursing staff too."

	- *"Recently on CTU, we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - *"When the hospital cancelled those lines, basically telling us, we no longer value you… and as soon as the pandemic numbers come down, we became an expense item. And suddenly the hospital says: you aren't worth it anymore." - *"I feel like as a young faculty, I don't give away my weekends, because that's where I make most of my money… there's a benefit to being there. And that doesn't contribute to my wellness. I'll say that. But it's hard to resist because the system is structured like that, right."	
Lack of camaraderie for difficult cases	- *"I talked about this, the council of the elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really	-

	well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX III

Category II: Protective Factors that Bring Joy and Satisfaction to Physicians

Theme	GIM	ED
Being rewarded and valued	- "It's good to feel like you could make a difference in a patient population." - "When my skill sets are valued."	- "You're a valued member of the organization, that if you if you left, you would be missed." - "You're rewarded for bringing value to the organization."
Having time to build rapport with patients	- "To connect with the person, and they felt they felt sort of heard in the end, we were able to sort of events, events, things, and it was that connection with the patient that, that I found sort of satisfying." - "The sense of connection that I had to the patient and the gratitude that this patient expressed." - "And having a patient actually know who I am and remember who I was, it was just incredible."	- "Positive interactions with the patients'
Reducing interruptions	- "Having time to interact with patients without being interrupted."	
Staff collegiality	- "I love my colleagues"	- "Positive interactions with the staff" - "Such wonderful colleagues everywhere. Like, literally everyone is friendly, smiling, and helpful." - "Just the interaction I got with all the staff and the collegiality." - "Colleagues that you can trust and turn to bounce things off"

Doing physicians' work	- "Sense of getting to use my skills and training to help this person"	- "When someone's sick, might actually do something meaningful to resuscitate somebody makes me happy… I feel good about myself and feel tired physically, but I feel satisfied at the end of the day." - "Interesting cases and good medicine, as well as, as well as patient satisfaction, but and, you know, and good outcomes."

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.

APPENDIX IV

Category III: Actionable Interventions to Reduce Burnout.

Theme	GIM	ED
Workload and scheduling	- "Communication app, basically where individuals would sign in to their role in the hospital every given day" - "Having a hospitalist to help with the load." - *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized." - Flexibility in scheduling (having locums to take unwanted call shifts/weekends) - "post-call" days or wellness days	- "Rather than us calling five different there should be a service that takes like a hospitalist service - it's expensive, but it's an easy, low lying fruit that is contributing to our burnout, for sure."
Interruptions and noise	- *"Answering phone calls, like perhaps there's a way to redirect phone calls so that they're batched or prioritized."	- "I think we need to, you know, alert the public to how they're supposed to behave in an emergency department or where they're accepting patient care in the hospital. Because that kind of behavior is not even acceptable, like at a family doctor's office at the dermatologists."
Bureaucracy and inefficiencies	- "More computers would be nice, but also coming up with a system where there's some leeway for order entry or verbal orders." - "Reducing like the amount of administration with order entry with Cerner."	

Interdepartmental conflict	- "Develop sort of interdisciplinary or cross cultural, cross disciplinary teams of physicians that work together so that we can actually work with them instead of always working against them. So something like might look like an internist, a GP, a nurse practitioner sort of all working together, instead of just being entirely internal medicine and keeping everybody at bay." - "Cultural change within surgical services." - "More buy in from higher ups in terms of surgical services, like accepting the actual surgical issues, because I've taken care of many surgical issues on CTU, even post op, they come back to CTU. Like it would be nice for the surgical services to take ownership of their patient." - Defining boundaries of our specialty (ie. Admission criteria) - Interdepartmental relationships: Developing personal connections with colleagues, particularly those in the emergency department and amongst other specialties can help to reduce stress and improve patient care. - Having an unbiased clinician to resolve challenging dispositions disputes of patients in the ER (the participant cited that this exists at the Mayo clinic).	- "It'd be nice to the culture change to accept that that when someone's on call there should be expected to receive phone calls at two in the morning or three in the morning, just like just like we do when we're awake there."

Social problems		- "A social/behavioral ICU" - "Improved social support person."
Non-physician roles	- "Hire extra staff on the wards so that that could reduce our administrative burden. And so that we can focus on the practice of medicine (i.e., social worker)" - "It would be nice to have like a chronic clinical associate or like nurse practitioner on each team." - Workforce planning and hiring enough people for the future.	- "Can we get more cleaners? Could we get more porters, that kind of thing." - "Trying to get us another staff member. to rise to get patients to where you can examine them and have them ready for examination and helping you get what you need to get that patient through so that you're not doing as many non-clinical tasks. -- an LPN is probably the most ideal." - "More housecleaners" - "Have people emerge and help them fill out the paperwork for housing, get them better clothes… get them better food than the sandwiches and things are not made with real food."
Violence Risk		- "Physical barriers to actually protect." - "Offsite opiate overdose unit" - "Offsite sobering units"
Waiting room medicine	- "Having quiet workspace, nice aesthetic workspace, places to meet, places to talk with patients and families, less cluttered hallways, all of these things contribute to the fatigue of the day."	- "Waiting room better staffed, maybe with someone who's like looking after these patients like watching out for, you know, signs of people escalating, people becoming more violent."
Financial structures and remuneration	- *"Recently on CTU (clinical teaching unit), we moved off of the set amount [during COVID] and back to fee for service. And I've never seen the teams look happier when we're on a set amount of money… you had more time	

	to teach, more time to look after patients. And we were in the thick of COVID, with no vaccinations. And I've never seen my faculty and teams actually look more satisfied. And then when that was pulled away, you go back to the grind. I agree money doesn't drive everything. But let's face it, we're all here to do a job and earn money and earn an income, pay our bills. That's probably one of the most important reasons as we work." - "So, I think we still need to find some funding model that is equitable for the time spent, not the clinical load, but the time spent. And that would then allow us to spend more time with our residents with our patients and spread the load. Because really what strikes us as the most stress is when we're dealing with a lot of sick patients, a lot of training needs, and we don't have enough time. " - Improving remuneration to attract fellows to live/work in Vancouver. - Consider moving away from FFS (fee for service) and adopting AFP (alternate funding plan), or a mixed model. - Pay for time and quality, not clinical load	
Lack of camaraderie for discussing difficult cases	- Attending monthly rounds to discuss difficult cases or to just check in => *"I talked about this, the council of the	

	elders kind of thing, where faculty and attendings once a week, BC Cancer Agency does this really well, they have tumour rounds, where they all get together and say this is a puzzling case. They talk about right. And something that because we all will face some diagnostic uncertainty, or just am I in the weeds here on this case, like I've inherited this case, this has been a door to door like a short to shore kind of case has been now on three CTUs, and I'm picking it up, am I missing something right? It's a safe space where we say, here's what I'm struggling with. And people can say that no, you actually, you know what, I can't think of anything else that feels okay. Right, but also just to be able to bounce it off of each other… And even if that week, nobody has a case, we can just check in on each other."	

*Text shown in black corresponds to data collected from focus groups in hospital 1 and text shown in red corresponds to data collected from the focus group at hospital 2.