Burnout and Distress Among Internal Medicine Program Directors: Results of A National Survey

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BACKGROUND: Physician burnout and distress has been described in national studies of practicing physicians, internal medicine (IM) residents, IM clerkship directors, and medical school deans. However, no comparable national data exist for IM residency program directors.

OBJECTIVE: To assess burnout and distress among IM residency program directors, and to evaluate relationships of distress with personal and program characteristics and perceptions regarding implementation and consequences of Accreditation Council for Graduate Medical Education (ACGME) regulations.

DESIGN AND PARTICIPANTS: The 2010 Association of Program Directors in Internal Medicine (APDIM) Annual Survey, developed by the APDIM Survey Committee, was sent in August 2010 to the 377 program directors with APDIM membership, representing 99.0 % of the 381 United States categorical IM residency programs.

MAIN MEASURES: The 2010 APDIM Annual Survey included validated items on well-being and distress, including questions addressing quality of life, satisfaction with work-life balance, and burnout. Questions addressing personal and program characteristics and perceptions regarding implementation and consequences of ACGME regulations were also included.

KEY RESULTS: Of 377 eligible program directors, 282 (74.8 %) completed surveys. Among respondents, 12.4 % and 28.8 % rated their quality of life and satisfaction with work-life balance negatively, respectively. Also, 27.0 % reported emotional exhaustion, 10.4 % reported depersonalization, and 28.7 % reported overall burnout. These rates were lower than those reported previously in national studies of medical students, IM residents, practicing physicians, IM clerkship directors, and medical school deans. Aspects of distress were more common among younger program directors, women, and those reporting greater weekly work hours. Work-home conflicts were common and associated with all domains of distress, especially if not resolved in a manner effectively balancing work and home responsibilities. Associations with program characteristics such as program size and American Board of

Internal Medicine (ABIM) pass rates were not found apart from higher rates of depersonalization among directors of community-based programs (23.5 % vs. 8.6 %, $p=0.01$). We did not observe any consistent associations between distress and perceptions of implementation and consequences of program regulations.

CONCLUSIONS: The well-being of IM program directors across domains, including quality of life, satisfaction with work-life balance, and burnout, appears generally superior to that of medical trainees, practicing physicians, and other medical educators nationally. Additionally, it is reassuring that program directors' perceptions of their ability to respond to current regulatory requirements are not adversely associated with distress. However, the increased distress levels among younger program directors, women, and those at community-based training programs reported in this study are important concerns worthy of further study.

KEY WORDS: graduate medical education; residency; burnout; well-being.

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INTRODUCTION

Burnout, depression, suicidal ideation, low quality of life, and dissatisfaction with work-life balance have been reported at all stages of medical training and in all medical specialties. For example, a large study of medical students at seven medical schools found burnout in 49.6 %, symptoms of depression in 46.5 %, and suicidal ideation in the prior 12 months in 11.2 %.¹ Another national study reported burnout in 51.5 % of internal medicine residents, low quality of life (QOL) in 14.8 %, and dissatisfaction with work-life balance in 32.9 %.² In a recent national study of practicing physicians, burnout was reported in 45.4 %, symptoms of depression in 37.8 %, suicidal ideation in the prior 12 months in 6.4 %, and dissatisfaction with work-life balance in 37.1 %.³

Similar issues have been reported to affect educational leaders, including internal medicine clerkship directors⁴ and medical school deans,⁵ among whom burnout rates of 61.8 % and 47.2 %, respectively, have been reported. Among internal medicine program directors, high rates of job turnover and dissatisfaction have been reported.^{6–8} However, validated measures of burnout and other distress factors have not been applied to this population to date. Examining the prevalence and correlates of distress among program directors relative to the previously studied groups of learners, practicing physicians, and educators may offer insights into the factors potentially contributing to distress across different job roles. For example, proposed contributors to distress among physicians include work-life imbalance, not deriving meaning from work, loss of workplace control and autonomy, and heavy workloads, especially related to undue administrative tasks.⁹ How program directors may differ from other physician groups with respect to these issues is unknown.

To understand the prevalence of distress among internal medicine program directors, we conducted a national survey in collaboration with the Association of Program Directors in Internal Medicine (APDIM). We assessed program directors' symptoms of burnout and depression, QOL, and satisfaction with work-life balance, in addition to demographic variables that may be related to distress. We also examined relationships of distress with personal and program characteristics and with perceptions regarding implementation and consequences of recent Accreditation Council for Graduate Medical Education (ACGME) regulations.

METHODS

The APDIM Survey Committee develops annual questionnaires to monitor characteristics of United States internal medicine residencies and address current issues facing residencies and program directors. For the 2010 survey, e-mail notifications with program-specific hyperlinks to a Web-based questionnaire were sent in August to each of the 377 APDIM member program directors, representing 99.0 % of the 381 United States categorical internal medicine residencies. Subsequent requests to complete the survey were sent bi-weekly until the survey closed in November 2010.

Prior to blinding of program identity for analysis, survey responses were appended with data from publicly available sources accessed in December 2010. Program description was obtained from American Medical Association Fellowship and Residency Electronic Interactive Database Access System (FREIDA) Online.¹⁰ Data from the Accreditation Council for Graduate Medical Education (ACGME) website¹¹ included accreditation cycle length, government affiliations, number of approved and filled training posi-

tions, and program director appointment date. The survey also included questions about program director perceptions regarding implementation and consequences of recent ACGME regulations. Additional survey details may be found at the APDIM website.¹²

Questions concerning QOL, satisfaction with work-life balance, symptoms of depression, and burnout were asked as detailed below. Overall QOL was measured by a single-item linear analog self-assessment (LASA). This instrument measured overall QOL on a 1–5 scale, with response anchors ranging from “As bad as it can be” (1) to “As good as it can be” (5). Low QOL was defined as response in the lowest two categories of this item. LASA instruments have been validated across multiple populations, including physicians, and are widely used in QOL research.^{2,13–17} We assessed program directors' satisfaction with the balance between their personal and professional life on a similar 5-point Likert scale, with low satisfaction defined as response in the lowest two categories of this item. This question was adapted from a validated questionnaire used in prior research.^{2,18,19} Program directors were asked whether they had experienced a conflict between work and personal responsibilities in the previous 3 weeks. They were also asked how they resolved their most recent conflict between work and personal responsibilities, in favor of the work responsibility, personal responsibility, or in a manner that met both responsibilities. These questions have been applied in previous studies of physicians.^{20–22}

Depression screening used the two-question approach described by Spitzer et al.²³ and validated by Whooley et al.²⁴ This instrument has been used in several prior studies of physicians.^{16,17,25,26} This tool includes questions about depressed mood and anhedonia: (1) “During the past month, have you often been bothered by feeling down, depressed, or hopeless?” and (2) “During the past month, have you often been bothered by little interest or pleasure in doing things?” A positive screen for depression is defined as a “yes” response to either question. This screening instrument has reported positive likelihood ratios of up to 3.42 for the diagnosis of current major depression and negative likelihood ratios as low as 0.07. These likelihood ratios are similar to those reported for other depression screening instruments.^{24,27}

The Maslach Burnout Inventory (MBI) is considered the reference standard for the assessment of burnout.²⁸ However, its length (22 items) limits its utility in large surveys addressing multiple content areas. Many evaluations of burnout have focused on high levels of either emotional exhaustion or depersonalization as the foundation of burnout among high-achieving medical professionals.^{29,30} Therefore, in this study symptoms of burnout were assessed using two single-item measures adapted from the full MBI: emotional exhaustion was assessed by the question, “How often do you feel burned out from your work?” and

depersonalization was assessed by the question, “How often do you feel you’ve become more callous toward people since you took this job?” Each question was answered on a 7-point Likert scale, with response options ranging from “Never” to “Every day”. Symptoms of high emotional exhaustion were defined by a frequency of at least weekly on the single-item emotional exhaustion measure. Similarly, symptoms of high depersonalization were defined by a frequency of at least weekly on the single-item depersonalization measure. These single items correlate strongly with the emotional exhaustion and depersonalization domains of burnout as measured by the full MBI.³¹ The single items have also been shown to perform well as predictive factors relative to the full MBI.³²

We summarized descriptive results using frequency tables. We applied ANOVA and Fisher’s exact tests of association as appropriate for analyses of the relationships between the categorical QOL, work-life balance, depression, and burnout variables with other continuous (e.g., age and weekly work hours) and categorical (e.g., sex and program type) factors, respectively. Multivariable analyses of the relationship of each distress variable with sex, age, weekly work hours, work-home conflicts, and how work-home conflicts were resolved were conducted using generalized linear models. Comparisons between physician populations were made where such data were available. Statistical analyses were conducted using SAS Version 9.2 [SAS Institute Inc, Cary, NC]. All analyses were two-tailed with $\alpha=0.05$. This study was approved by the Mayo Clinic Institutional Review Board.

RESULTS

Of 377 eligible program directors, 282 (74.8 %) completed surveys. The average age of respondents was 51.4 years, and 69.9 % were men. The average program director tenure was 7.1 years, and weekly work hours averaged 60.2. The majority of programs maintained a university affiliation or were university-based. Additional respondent characteristics are detailed in Table 1. Data available on the full population of program directors for tenure, program type, program size, and geographic region confirmed no statistical differences between respondents and non-respondents.

Overall QOL was rated “as bad as it can be” or “somewhat bad” by 12.4 % of respondents (Fig. 1). Satisfaction with work-life balance was rated “as bad as it can be” or “somewhat bad” by 28.8 % of program directors (Fig. 1). These rates were slightly, but not statistically significantly, better than the respective rates seen among internal medicine residents² (14.8 % and 32.9 %, respectively, with $p=0.27$ and $p=0.16$, respectively). Additional comparative data for other physician populations were not available for these factors.

Table 1. Personal and Program Characteristics of Internal Medicine Program Directors Responding to the 2010 APDIM Survey ($n=282$)*

Variable	Category/Units	Mean (SD) or n (%)
Age	Years	51.4 (8.2)
PD Tenure	Years	7.1 (6.1)
Work Hours	Weekly Average Hours	60.2 (10.1)
Sex	Male	195 (69.9)
Academic Rank	None	16 (5.8)
	Instructor	4 (1.4)
	Assistant Professor	60 (21.6)
	Associate Professor	114 (41.0)
	Full Professor	84 (30.2)
Specialty†	General Internal Medicine (GIM)	166 (58.9)
	Pulmonary/Critical Care	42 (14.9)
	Hospital Medicine	32 (11.3)
	Infectious Disease	28 (9.9)
	Nephrology	14 (5.0)
	Geriatrics	12 (4.3)
	Rheumatology	9 (3.2)
	Endocrinology	8 (2.8)
	Other	5 (1.8)
	Oncology	5 (1.8)
	Hematology	4 (1.4)
	Gastroenterology	4 (1.4)
	Cardiology	3 (1.1)
	Palliative Care	3 (1.1)
	Preventive Medicine	2 (0.7)
	Allergy/Immunology	1 (0.4)
Program Type	Community-based with university affiliation	143 (50.7)
	University-based	99 (35.1)
	Community-based	34 (12.1)
	Military-based	6 (2.1)

*Numbers within a category may not sum to 282 due to missing data

†More than one specialty affiliation allowed

A positive depression screen was reported by 27.3 % of program directors. This rate was substantially lower than that previously reported in medical students¹ (46.5 %, $p<0.001$) and practicing physicians³ (37.8 %, $p<0.001$). In addition, 27.0 % of respondents reported emotional exhaustion, 10.4 % reported depersonalization, and 28.7 % reported overall burnout. These rates compared very favorably to national rates among medical students¹ (37.4 %, 27.9 %, and 49.6 %, respectively, each $p<0.001$), internal medicine residents² (45.8 %, 28.9 %, and 51.5 %, respectively, each $p<0.001$), practicing physicians³ (37.9 %, 29.4 %, and 45.4 %, respectively, each $p<0.001$), clerkship directors⁴ (46.2 %, 41.3 %, and 61.8 %, respectively, $p=0.002$, $p<0.001$, and $p<0.001$, respectively) and medical school deans⁵ (40.4 %, 23.6 %, and 47.2 %, respectively, $p=0.02$, $p=0.002$, and $p=0.002$, respectively) (Fig. 2).

Work-home conflicts were common among responding program directors, with 64.5 % reporting experience with a work-home conflict in the 3 weeks prior to completing the survey. This rate is comparable to the rates reported in prior studies of practicing physicians.^{20–22} However, a majority of program directors (62.3 %) endorsed being able to resolve their most recent such conflict in a manner meeting both sets of responsibilities, with 27.9 % reporting that their work responsibility won out and 9.8 % reporting that their home

Figure 1. Overall quality of life (QOL) and satisfaction with work-life balance among internal medicine program directors.

responsibility won out. Prior literature in practicing surgeons²⁰ has suggested lower rates of conflict resolution to meet both sets of responsibilities and higher rates of prioritization of work responsibilities (51.7 % and 36.4 %, respectively, $p=0.002$). Similarly, lower rates of conflict resolution to meet both sets of responsibilities and higher rates of prioritization of work responsibilities (36.4 % and 56.6 %, respectively, $p<0.001$) have been reported for academic internists.²²

Observed associations of well-being factors with demographic variables were largely consistent with prior literature. Burnout rates were higher among women than men (high emotional exhaustion 35.7 % vs. 23.7 %, $p=0.04$; high depersonalization 16.9 % vs. 7.3 %, $p=0.03$; overall burnout 39.8 % vs. 23.8 %, $p=0.009$). Depersonalization symptoms affected younger program directors to a greater degree than older program directors (mean age 46.9 years

for those reporting depersonalization vs. 51.9 years for those not reporting depersonalization, $p=0.002$), but differences in emotional exhaustion and overall burnout did not statistically significantly differ by age. No distress factor was statistically significantly associated with program director tenure. Increasing work hours exhibited a dose-response relationship with worsened quality of life and decreased satisfaction with work-life balance (Fig. 3; for both, $p<0.001$). All aspects of burnout also affected those working more hours weekly to a greater extent. The mean number of weekly work hours was 62.4 for those reporting emotional exhaustion vs. 59.4 for those not reporting emotional exhaustion ($p=0.03$), 64.8 for those reporting depersonalization vs. 59.7 for those not reporting depersonalization ($p=0.01$), and 62.2 for those with overall burnout vs. 59.4 for those not reporting overall burnout ($p=0.04$).

Figure 2. Emotional exhaustion, depersonalization, and overall burnout among internal medicine program directors (IM PDs), medical students, internal medicine (IM) residents, practicing physicians, IM clerkship directors (IM CDs), and medical school deans nationally. (% reporting high levels of each burnout domain).

Figure 3. Mean weekly work hours across levels of overall quality of life (QOL) and satisfaction with work-life balance among internal medicine program directors.

Work-home conflicts were strongly associated with diminished quality of life ($p<0.001$), lower satisfaction with work-life balance ($p<0.001$), emotional exhaustion ($p<0.001$),

depersonalization ($p=0.002$), overall burnout ($p<0.001$), and symptoms of depression ($p=0.03$) (Fig. 4). Program directors who reported being able to resolve conflicts in a manner

Figure 4. Relationship of work-home conflicts with distress rates among internal medicine program directors. (Survey question: Have you experienced a conflict between work and personal responsibilities in the last 3 weeks?).

meeting both work and home responsibilities reported the lowest rates of distress across all domains ($p<0.001$ for low QOL, dissatisfaction with work-life balance, emotional exhaustion, overall burnout and symptoms of depression; $p=0.02$ for depersonalization) (Fig. 5). Of note, female program directors were more likely to report recent work-home conflicts (76.2 % vs. 59.5 %, $p=0.009$). These conflicts were also somewhat (although not statistically significantly) more commonly resolved in favor of work (37.3 % vs. 23.7 %), and less commonly resolved in a manner balancing work and home responsibilities for women (55.4 % vs. 65.3 %, $p=0.06$).

Associations of distress factors with program characteristics such as program size and American Board of Internal Medicine certification examination pass rates were not found. We also did not observe any consistent associations between distress and perceptions of implementation and consequences of program regulations. However, program directors at community-based training programs reported higher rates of depersonalization relative to those with other training program affiliations (23.5 % vs. 8.6 %, $p=0.01$).

In multivariable models incorporating sex, age, weekly work hours, work-home conflicts, and how work-home conflicts were resolved, only the two work-home conflict variables were statistically significantly associated with each distress variable (data not shown). Increasing weekly work hours remained associated with lower QOL, dissatisfaction with work-life balance, and depersonalization. Sex was no longer statistically significant in any of these adjusted models.

DISCUSSION

This national study suggests that among internal medicine program directors, well-being across domains, including quality of life, satisfaction with work-life balance, burnout, and symptoms of depression, appears generally superior to that of medical students, practicing physicians, internal medicine residents, internal medicine clerkship directors, and medical school deans nationally. In addition, it is reassuring that program director perceptions of their ability to respond to current regulatory requirements are not adversely affected by distress. However, the increased distress levels among younger program directors, women, and community-based program directors reported in this study remain important concerns.

While a limited number of prior studies have explored the sources of job satisfaction among internal medicine program directors,^{6-8,33} it remains unclear why internal medicine program directors report less distress than other physicians, despite similar or even more challenging work hours and job responsibilities. Previous literature has suggested that pursuing activities with personal meaning is crucial to job satisfaction and well-being.³⁴ It is possible that physicians who engage in program leadership may derive greater personal meaning from their primary job responsibilities of education and mentoring than other physicians find in their daily work. It is also possible that program directors may have greater autonomy, control, or job flexibility than other physicians. Further research is needed to better understand levels of meaning and autonomy among program directors. Thematic insights afforded

Figure 5. Relationship of work-home conflict resolution with distress rates among internal medicine program directors. (Survey question: Please think of the most recent conflict between work and personal responsibilities you have experienced. Was this resolved in favor of work responsibilities, in favor of personal responsibilities, or in a manner that met both responsibilities?).

by qualitative methodologies may be particularly useful in support of this goal.

Although internal medicine program directors reported a frequency of work-home conflicts similar to that reported by other groups of physicians, they were more likely to report being able to resolve these conflicts in a manner accommodating both work and home responsibilities. As this ability is strongly associated with decreased distress and better well-being,^{20–22} additional studies to understand the strategies used by individuals able to balance work and home responsibilities may provide important insight into approaches to benefit the well-being of all physicians.

Female program directors reported higher rates of burnout than their male counterparts. The reasons for this are not fully understood, but work-home conflicts and how they are resolved may play an important role. The fact that in models including both sex and work-home conflict variables, the differences between men and women were no longer present may support this hypothesis. In this study, women were more likely to experience conflicts between work and home responsibilities and somewhat less likely to report being able to resolve these conflicts in a manner effectively balancing both sets of responsibilities. These results are similar to those reported previously.²¹ Given that both younger and female program directors are more likely to have home parenting responsibilities, the potential for work-home conflict and associated distress in these groups is high. Effectively addressing program director burnout will likely require further research elucidating the complex relationships among program director job characteristics and personal factors, with an end goal of developing effective individual and institutional support strategies.

It is also unclear why program directors at community-based programs reported higher rates of depersonalization. It is possible these program directors derive less meaning from their position, experience less autonomy and control at their institutions, or feel less institutional support, but these factors have not been studied to date. Focused research comparing experiences of community-based program directors with those at other programs will be necessary to clarify the significance of the differences observed in this study.

This study has a number of limitations. First, nonresponse bias could affect the results, although the proportion of program directors completing the APDIM survey was high and no differences from the full program director population were observed for available variables. Second, not all domains of well-being were assessed in this study, so these results do not provide insight into job satisfaction or other factors potentially related to well-being. In addition, many demographic variables were not evaluated in this study. Personal factors, such as home support and personal coping strategies, and program or institutional factors, such as research emphasis or curricular structure, may also be

associated with well-being, and should be addressed in future research. Third, this study cannot address causality or directionality of the observed associations, given its cross-sectional design.

In summary, dissatisfaction with quality of life and work-life balance, burnout, and symptoms of depression among internal medicine program directors are less common than among medical students, practicing physicians, internal medicine residents, and other education leaders nationally. The reasons underlying these lower distress levels are not well understood, and should be the focus of further research. In addition, efforts to support the well-being of younger program directors and women in these academic leadership roles are needed.

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Conflict of Interest: The authors declare that they do not have a conflict of interest.

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