

AAIM Perspectives

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Internal Medicine Residency Program Director Burnout and Program Director Turnover: Results of a National Survey



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KEYWORDS: Burnout; Internal medicine; Physician turnover; Program director; Residency

INTRODUCTION

Burnout, a work-related syndrome involving high levels of emotional exhaustion, depersonalization, and sense of reduced personal accomplishment,¹ is common among physicians and learners; across a range of different

studies, roughly one-half of all physicians meet criteria for burnout.^{2,3} Burnout has been associated with a number of different negative outcomes, including physician turnover and diminished patient care quality, professionalism, physician health, work effort, and health care system measures.²⁻⁵ Of concern, Shanafelt and colleagues⁶ found that the percentage of US physicians who met criteria for burnout rose from 46% in 2011 to 54% in 2014.

A national survey of internal medicine program directors in 2010 found that only 29% met criteria for burnout, which was lower than burnout rates concurrently measured among medical students, internal medicine residents, practicing physicians, clerkship directors, and medical school deans (these groups ranged from 45%–62%).⁷ The authors found that burnout among program directors was strongly associated with work-home conflicts, which were more commonly reported among female program directors.⁷

An important negative association with burnout is physician turnover.^{4,8-10} Turnover of a residency program director impacts not just the physician and clinical practice, but the residency program and residents in it.¹¹

Funding: The Mayo Clinic Survey Research Center provided assistance with the survey design and data collection. This study was supported in part by the Mayo Clinic Internal Medicine Residency Office of Educational Innovations as part of the Accreditation Council for Graduate Medical Education's Educational Innovations Project. The funding agency had no role in the design or conduct of the study, the writing of the manuscript, or the decision to publish.

Conflict of Interest: The authors have no relevant potential conflicts of interest.

Authorship: All authors had access to the data and participated in writing this manuscript. This work was previously summarized in a poster and oral presentation at the Alliance for Academic Internal Medicine's (AAIM) Alliance Skills and Leadership Conference, Grapevine, Tex, October 2017.

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Over the past 2 decades, the proportion of program directors in the role for 3 or fewer years has ranged from one-third to one-half;^{11,12} since 2009, the median tenure of an internal medicine program director has ranged from 4 to 6 years.¹² As the role of program director becomes increasingly complex, years of experience and stability in program leadership are likely to result in more effective educational programs. Indeed, program director turnover is a concern of the Accreditation Council for Graduate Medical Education (ACGME) Residency Review Committee for Internal Medicine,¹³ which includes the following program requirement: “The program director should continue in his or her position for a length of time adequate to maintain continuity of leadership and program stability.”¹⁴ Because patterns of practice established in residency have been shown to persist for decades after training,¹⁵⁻¹⁷ residency training disrupted by program director burnout and turnover could have wide-ranging, long-term adverse effects.

In this study, we sought to assess: 1) potential associations between current (2016) program director burnout and program and program director characteristics; 2) potential temporal associations between actual program director turnover and program director burnout or consideration of resigning; and 3) the durability of burnout and consideration of resigning from 1 to 4 years following the 2012 survey.

METHODS

Study Setting and Participants

The Association of Program Directors in Internal Medicine (APDIM) administers an annual national survey to capture demographics of internal medicine residency programs and program directors over time and to solicit program director insights on timely topics pertinent to graduate medical education. The survey committee sent the 2016 survey to 382 APDIM member program directors (91% of the 418 ACGME-accredited internal medicine residency programs as of June 30, 2016) via an e-mailed link, unique for each program, in August 2016. Automated weekly reminder requests were e-mailed to program directors, and committee members sent personal reminder e-mails to nonresponders, copying the program administrator, from October until the survey closed on December 1, 2016. The same survey administration process was used for the 2012-2015 surveys.

The core survey section collects demographic data about the program director (age, sex, academic rank, specialty) and program (numbers of associate program directors, core faculty, and chief medical residents; utilization of volunteer faculty; positions filled by US allopathic medical graduates; nonclinical protected time for program directors). Starting annually with the 2012 survey, we assessed burnout using 2 questions from the

Maslach Burnout Inventory:¹ “How often do you feel burned out from work?” (emotional exhaustion) and “How often do you feel you’ve become more callous toward people since you took this job?” (depersonalization). Responses are given using a 7-point scale ranging from “never” to “every day.” Studies of medical students and physicians have found strong correlations between these items and their respective emotional exhaustion and depersonalization domain scores from the full Maslach Burnout Inventory,¹⁸⁻²⁰ and these items have subsequently been applied in numerous

physician burnout studies.^{7,8,21} We also asked program directors “Have you considered resigning in the past 12 months?,” to which they could answer “yes” or “no.” Finally, we linked survey responses with publicly available data including American Board of Internal Medicine (ABIM) 3-year rolling pass rate (2013-2015 for the 2016 survey), number of ACGME-approved training positions, and program director appointment date prior to de-identification. The survey protocol was deemed exempt by the Mayo Clinic Institutional Review Board.

PERSPECTIVES VIEWPOINTS

- One third of medicine residency program directors are burned out.
- Nearly half had considered resigning as program director in the preceding year.
- Less than half of residency program directors in 2012 were still program directors in 2016.
- Program director turnover is associated with burnout and with consideration of resigning.

Data Analysis

We considered a program director to have a positive screen for burnout if they responded with a frequency of at least weekly for either of the 2 burnout items (emotional exhaustion or depersonalization).^{7,8,21} For the associative analysis, we referenced the ACGME common program requirements to categorize number of approved positions into approximate tertiles (<41, 41-79, >79) to identify programs that exceeded the minimum requirements of numbers of associate program directors and core faculty for their size. We dichotomized ABIM 2013-2015 rolling pass rate as >80% or not. We collapsed the academic ranks of “none,” “instructor,” and “assistant professor” into “assistant professor or lower” and we dichotomized specialty as general internal medicine or hospital medicine (“GIM/HIM”) or “IM subspecialist.” For percent of categorical positions filled by US medical school

graduates, nonclinical protected time, age, and tenure, we categorized the variables into approximate tertiles as closely as ties at boundary values allowed. We fit a multivariable logistic regression model by the method of maximum likelihood to estimate odds ratios and tested for potential associations of the covariates described above with program director burnout.

For longitudinal assessment of change of program director, we assessed the program directors who responded to the 2012 survey for burnout and consideration of resignation on subsequent 2013-2016 surveys. We collected the program director appointment date from the ACGME website as part of the annual survey process each June. We compared the program director appointment dates from the 2012 cohort to these annual ACGME updates to identify changes in program directors. We used the day prior to the new appointment date as the end date for the previous program director. The traditional timeline for survey submission is August 1 to November 15, so we flagged program director changes occurring during this window as uncertain respondents and excluded survey responses for that year from subsequent analyses. We considered the survey timeframe midpoint of October 1 as the survey completion date each year. We analyzed the 2012 cohort data using Cox proportional hazards models to assess potential effects of program director burnout and considering resigning in the prior 12 months on hazard rates for a change in program director in the following year. We estimated the hazard ratios (HR) using the Cox partial likelihood to allow for time-dependent covariates arising from sequential survey administrations. We used Fisher's exact tests to assess durability of burnout and resignation consideration at 1, 2, 3, and 4 years after the 2012 survey for the 2012 program director cohort. The threshold for statistical significance was set at $P < .01$.

Statistical analyses were performed using SAS version 9.4 (SAS Institute Inc., Cary, NC).

RESULTS

For the 2016 survey, 251 (66%) program directors responded to the survey and 245 (64%) included responses to both Maslach items, allowing for their inclusion in the associative analysis. The available characteristics of survey nonrespondents are presented and compared with respondents in **Table 1**. While respondents were less likely to be from the Midwest and more likely to be from the Northeast ($P = .003$), there were no significant differences in program type, size, ABIM pass rate, or program director tenure between those who responded to the 2016 survey and those who did not.

Eighty-one respondents (33%) met the criteria for burnout and 118 (48%) had considered resigning in the preceding year; 69 of the 81 who met criteria for burnout (85%) had considered resigning, while 49 of the 164 program directors who did not meet criteria for burnout had considered resigning (30%, $P < .0001$). A multivariable logistic regression model for the probability of a positive program director burnout screen indicated a significant association between consideration of resigning in the preceding year and burnout (odds ratio 16.24; 99% confidence interval [CI], 5.08-51.90; $P < .0001$). We did not find evidence of associations with burnout for any of the other available covariates (**Table 2**), including program size, ABIM pass rate, administrative support, sex, age, academic rank, or tenure (all $P > .08$).

Similar percentages of program directors met criteria for burnout and had considered resigning from 2012 to 2016 (**Table 3**). Of the 255 program directors

Table 1 Characteristics of Responders and Nonresponders (N = 382) to the 2016 APDIM National Survey

Characteristic: Measure	Responders (n = 245)	Nonresponders (n = 137)	P Value
PD tenure: Mean no. of years (SD)	5.8 (5.9)	7.4 (7.2)	.04*
Program type: n (%)			.71 [†]
Community-based, university-affiliated	125 (51%)	72 (53%)	
University-based	88 (36%)	45 (33%)	
Community-based	27 (11%)	15 (11%)	
Military-based	5 (2%)	4 (3%)	
Other/unknown	0 (0%)	1 (1%)	
Region: n (%)			.003 [†]
Northeast	91 (37%)	36 (26%)	
South	69 (28%)	39 (29%)	
Midwest	44 (18%)	42 (31%)	
West	41 (17%)	17 (12%)	
Other	0 (0%)	3 (2%)	
Program size: Mean no. of ACGME-approved positions (SD)	70.0 (41.0)	62.1 (36.4)	.05*
ABIM program pass rate (2013-2015): Mean percentage (SD)	87.8 (7.8)	87.2 (8.7)	.45*

ABIM = American Board of Internal Medicine; ACGME = Accreditation Council of Graduate Medical Education; APDIM = Association of Program Directors in Internal Medicine; PD = program director; SD = standard deviation.

*Welch *t* test.

[†]Fisher's exact test.

who completed both Maslach items in 2012, 132 (52%) were no longer program directors as of September 30, 2017. A total of 16 (6%) survey responses were excluded due to uncertainty in identity of completing program director. For the 2012 cohort, there was an association between meeting criteria for burnout and

no longer being in the program director role a year later (HR 1.89; 99% CI, 1.11-3.23; $P = .002$) (Figure 1a). There was also a strong association between a program director considering resigning and no longer being in the program director role a year later (HR 4.05; 99% CI, 2.17-7.56; $P < .0001$) (Figure 1b).

Table 2 Multivariate Analysis of PD Burnout and Potentially Associated Program Director (PD) Demographics and Program Characteristics (N = 245)

	Overall n (%)	Positive Burnout Screen		P Value
		n (%)	OR (99% CI)	
PD demographics				
Sex				
Female	92 (38%)	27 (29%)	.79 (0.29-2.16)	.54
Male	145 (59%)	53 (37%)	reference	
Not reported	8 (3%)	—	—	
Age, y				
<45	73 (30%)	28 (38%)	1.30 (0.33-5.12)	.74
45-54	84 (34%)	30 (36%)	1.42 (0.43-4.60)	
55+	81 (33%)	22 (27%)	reference	
Not reported	7 (3%)	—	—	
Tenure				
≤2	89 (36%)	28 (31%)	1.69 (0.44-6.58)	.57
3-6	74 (30%)	29 (39%)	1.12 (0.33-3.85)	
≥7	82 (33%)	24 (29%)	reference	
Specialty				
GIM or HIM	182 (74%)	66 (36%)	1.10 (0.34-3.52)	.84
IM Subspecialist	63 (26%)	15 (24%)	reference	
Academic rank				
Assistant Professor or lower	96 (39%)	32 (33%)	2.51 (0.53-12.04)	.23
Associate Professor	98 (40%)	37 (38%)	2.53 (0.61-10.44)	
Professor	51 (21%)	12 (24%)	reference	
Considered resigning as PD in last year?				
Yes	118 (48%)	69 (58%)	16.24 (5.08-51.90)	< .0001
No	125 (51%)	11 (9%)	reference	
Not reported	2 (1%)	—	—	
Program characteristics				
ACGME Approved Positions				
<41	75 (31%)	26 (35%)	1.53 (0.35-6.70)	.67
41-79	88 (36%)	32 (36%)	1.01 (0.29-3.59)	
>79	82 (33%)	23 (28%)	reference	
ABIM 2013-2015 rolling pass rate				
<80 %	39 (16%)	17 (44%)	1.06 (0.29-3.85)	.90
≥80%	192 (78%)	60 (31%)	reference	
Not reported	14 (6%)	—	—	
APDs above ACGME minimum?				
Yes	101 (41%)	29 (29%)	0.88 (0.31-2.49)	.75
No	144 (59%)	52 (36%)	reference	
Core Faculty above ACGME minimum?				
Yes	149 (61%)	55 (37%)	1.70 (0.62-4.64)	.18
No	96 (39%)	26 (27%)	reference	
Chief Medical Resident(s)?				
Yes	193 (79%)	62 (32%)	2.41 (0.57-10.23)	.12
No	52 (21%)	19 (37%)	reference	
Utilization of volunteer faculty?				
Yes	141 (58%)	52 (37%)	1.54 (0.56-4.22)	.27

Table 2 (Continued)

	Overall n (%)	Positive Burnout Screen		P Value
		n (%)	OR (99% CI)	
No	104 (42%)	29 (28%)	reference	
Categorical positions filled by USMG				.33
<17%	80 (33%)	26 (33%)	0.78 (0.19-3.25)	
17%-64%	80 (33%)	36 (45%)	1.54 (0.43-5.44)	
65% or higher	83 (34%)	19 (23%)	reference	
Not reported	2 (1%)	—	—	
Nonclinical protected time for PD				.40
<50%	52 (21%)	20 (38%)	2.03 (0.53-7.80)	
50-64%	108 (44%)	39 (36%)	1.42 (0.47-4.26)	
65% or more	84 (34%)	22 (26%)	reference	
Not reported	1 (0%)	—	—	

ABIM = American Board of Internal Medicine; ACGME = Accreditation Council of Graduate Medical Education; APD = associate program director; CI = confidence interval; GIM or HIM = general internal medicine or hospital internal medicine; OR = odds ratio; PD = program director; USMG = US medical school graduate.

Table 3 Summary of Burnout and Consideration of Resigning from 2012-2016

PD Characteristics	2012 (n = 255)	2013 (n = 249)	2014 (n = 217)	2015 (n = 214)	2016 (n = 245)
Burnout	86 (34%)	78 (31%)	59 (27%)	67 (31%)	81 (33%)
High emotional exhaustion	77 (30%)	73 (29%)	54 (25%)	62 (29%)	74 (30%)
High depersonalization	40 (16%)	33 (13%)	31 (14%)	40 (19%)	46 (19%)
Considered resigning	103 (41%)	121 (49%)	114 (53%)	109 (51%)	118 (48%)

PD = program director.

Among the 80 program directors who met criteria for burnout in 2012, 36 (45%) were still program directors and completed the annual survey in 2016; 25 (69%) met criteria for burnout in 2016 (Figure 2a). Among the 163 program directors who did not meet criteria for burnout in 2012, 64 (39%) were still program directors and completed the survey in 2016; 56 (88%) did not meet criteria for burnout in 2016 (Figure 2b). Of the 97 program directors who had considered resigning in 2012, 31 (32%) were still program directors and completed the annual survey in 2016; 24 (77%) also considered resigning in 2016 (Figure 2c). Of the 145 program directors who had not considered resigning in 2012, 68 (47%) were still program directors and completed the survey in 2016; 35 (51%) had not considered resigning in 2016 (Figure 2d).

DISCUSSION

We found that the prevalence of burnout among internal medicine program directors has been stable over time,⁷ and it remains lower than the prevalence of burnout among internal medicine physicians in general²¹ and lower than residents and other medical educational administrative leaders.^{7,22} We did not find associations between burnout and program characteristics or program director demographics,

which supports previous findings.⁷ However, we did find that burnout was associated with consideration of resigning as program director and with program director turnover; we also found that a high percentage of program directors who were burned out and remained in the program director role met criteria for burnout years later.

While burnout was associated with program director turnover, we found a particularly strong association between consideration of resigning and program director turnover. Alarming, almost one-half of the program directors in our sample had considered resigning in the preceding year. Burnout was associated with consideration of resigning, but there are clearly additional factors that contribute to program director turnover: notably, 42% of the program directors in 2016 who had considered resigning did not meet criteria for burnout. Residency program directors experience the factors that contribute to physician burnout^{10,23} and that lead medical school faculty to consider leaving academic medicine;²⁴ in addition, residency program directors face several role-specific challenges that might contribute to burnout, considering resigning, and turnover, including frustration with regulatory and accreditation requirements, a perceived lack of support from department chairs and hospital administration to protect residents from high service demands, and difficulty balancing the demands of the

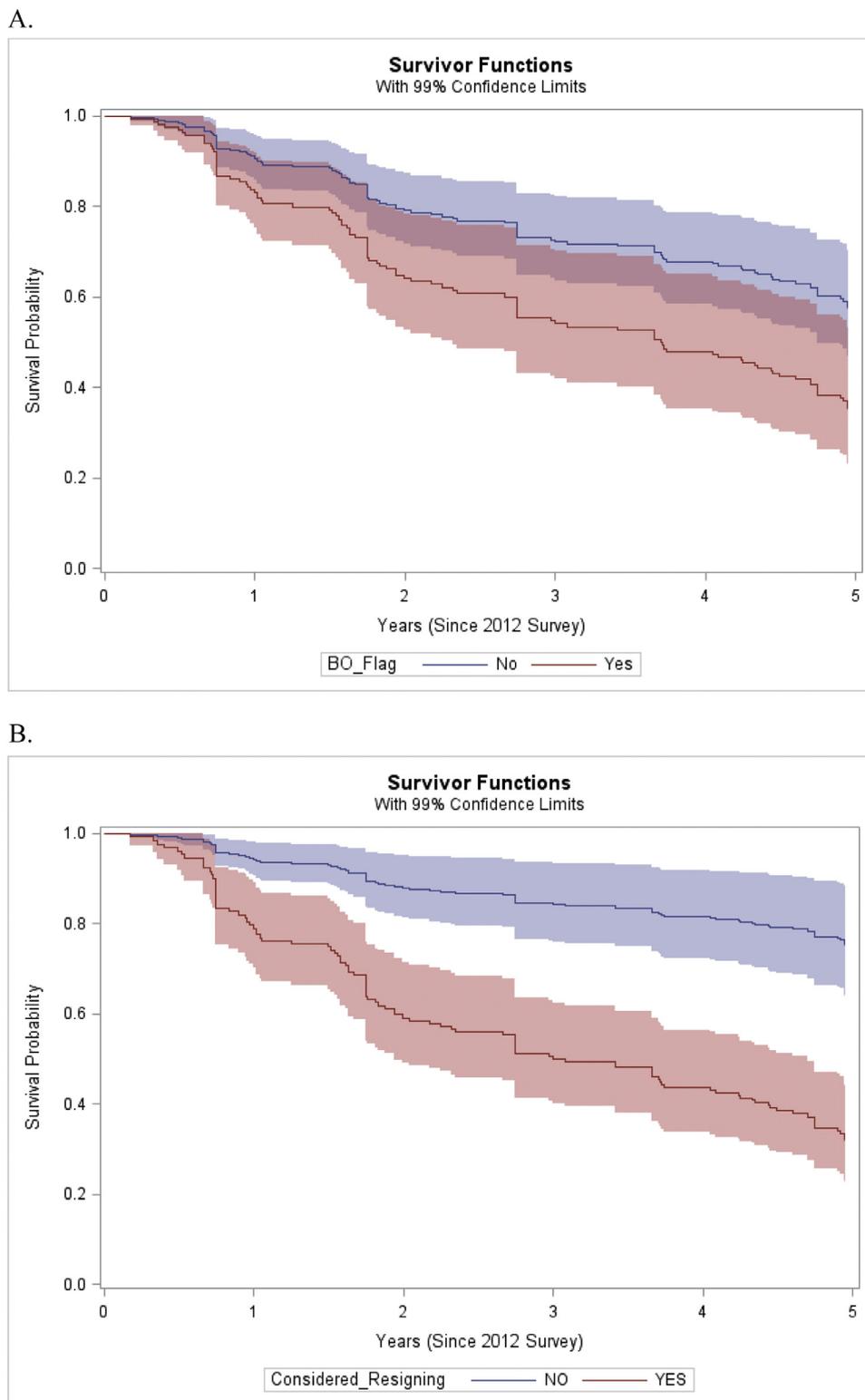


Figure 1 “Survival” in the program director (PD) role: Cox proportional hazards models to assess potential effects of (A) PD burnout and (B) considering resigning in the prior 12 months on hazard rates for a change in PD in the following year.

program director role with clinical practice and personal and family time. Despite all of these potential contributors to burnout, program directors have a lower prevalence of burnout than physicians in general and other

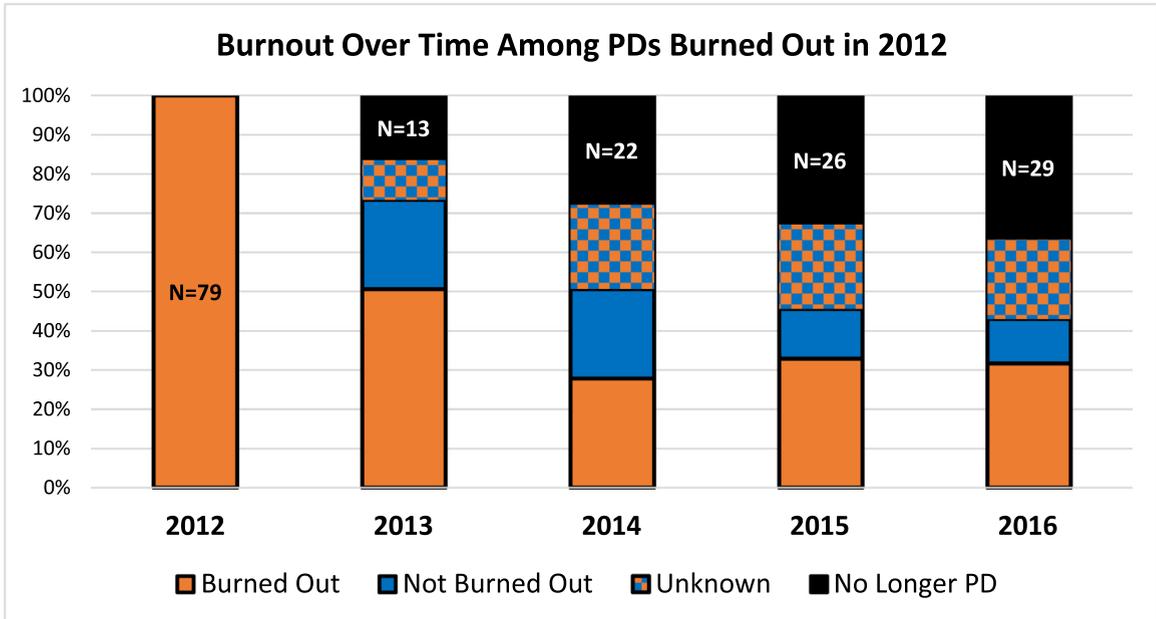
physician educators and leaders,⁷ an observation that deserves further study.

The ideal tenure of a residency program director is unknown, but the median tenure we found in 2016 of

4 years seems shorter than ideal; 4 years is the time needed to recruit one class of residents and see them through their 3-year residency. Moreover, the program director role is very complex, resulting in a steep learning curve for the first few years, during which program directors must learn how to balance many competing priorities and manage recruitment season, a broad curriculum,

evaluations, milestone assessment and attainment, struggling learners, faculty development, oversight of multiple different medical specialty fellowships, and all the ACGME requirements for a successful, accredited program.¹⁴ Given that physician turnover has been associated with multiple negative effects, including burnout among colleagues, reduced patient care quality, and

A. Outcomes for PDs who met criteria for burnout in 2012



B. Outcomes for PDs who did not meet criteria for burnout in 2012

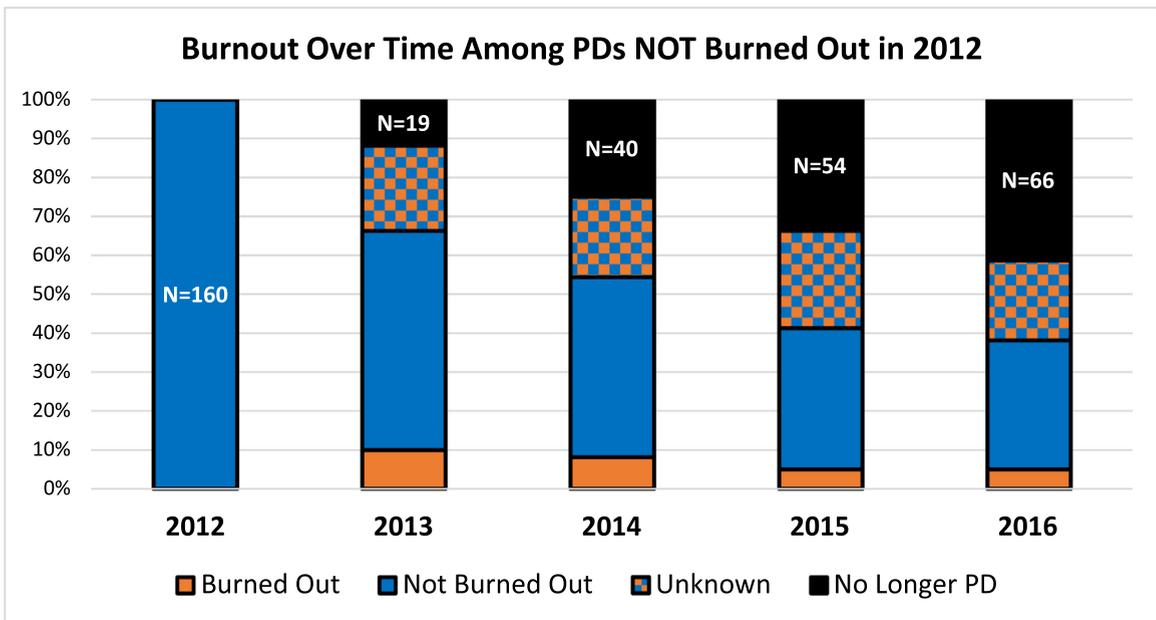
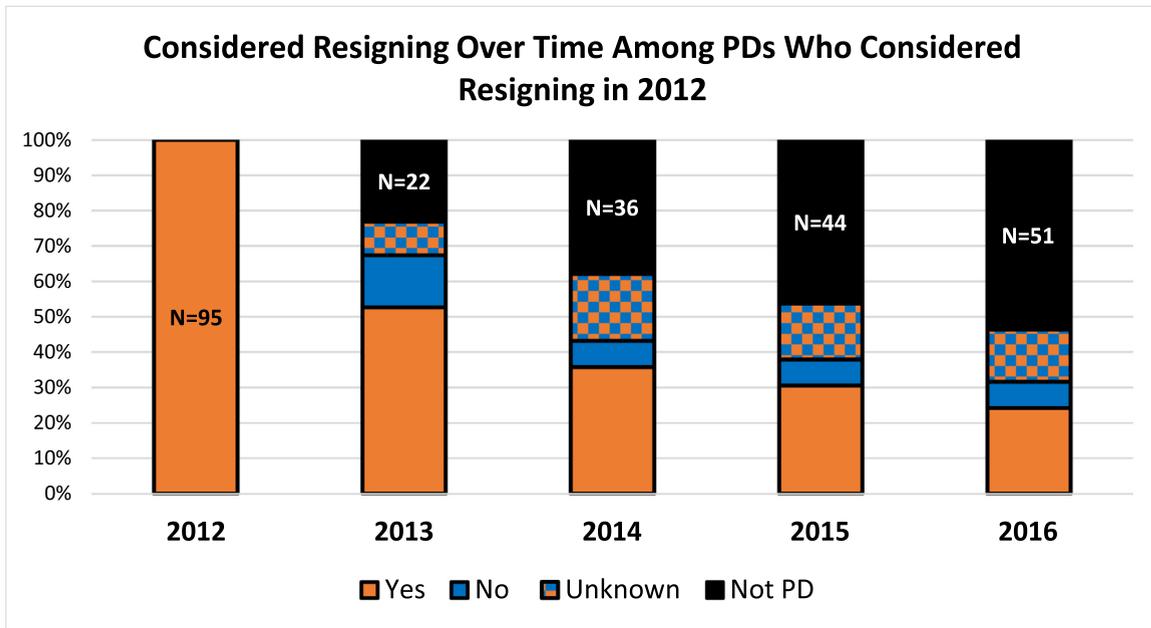


Figure 2 Outcomes over time for program directors (PDs) in the 2012 survey who (A) met criteria for burnout, (B) did not meet criteria for burnout, (C) had considered resigning, and (D) had not considered resigning. There were 4 possible outcomes for each cohort: remain in original classification, switch to alternate classification, be “unknown” (no survey response data), or no longer be the PD of the same program.

C. Outcomes for PDs who had considered resigning in 2012



D. Outcomes for PDs who had not considered resigning in 2012

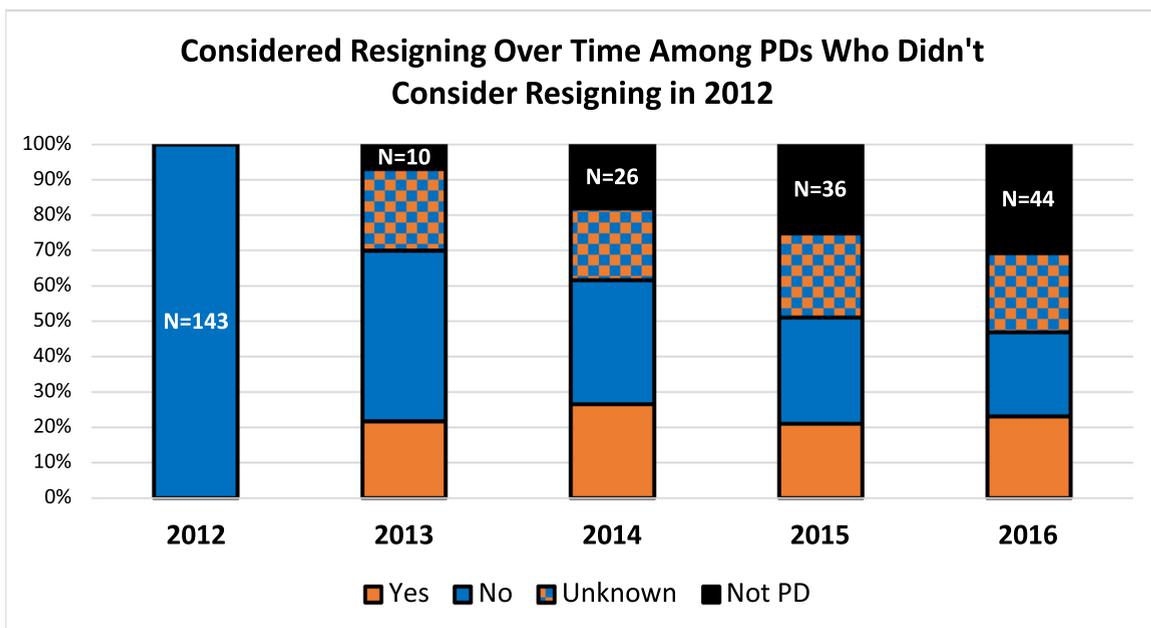


Figure 2 Continued.

substantial costs,^{9,10} it is plausible that the relatively short tenure of program directors is harmful to residents, health systems, and also the downstream patient care of residency graduates.

In 1999, Beasley and colleagues¹³ found a similar rate of internal medicine program director turnover (~10% per year) and that the following variables were associated with program director turnover: low satisfaction with colleague relationships, a high percentage of administrative work time, perceiving the job as a “stepping stone,” and not having had formal

training to deal with problem residents. A follow-up survey of internal medicine program director satisfaction in 2005 found somewhat improved overall program director satisfaction and turnover compared with 1996, and positive associations between satisfaction and the number of support personnel (including staff, associate program directors, chief residents, and key faculty) and reduced clinical service time.¹¹ Studies assessing program director burnout, satisfaction, and turnover in other disciplines have generally found similar themes, including the negative impact of

administrative hassles and the tension between balancing work responsibilities and personal life.²⁵⁻²⁸ Given the importance of the program director role, additional study into potential interventions to reduce burnout and to promote satisfaction and sustainability in the program director role is needed.

We also found that the presence or absence of burnout in individual program directors was fairly stable over time: 69% of program directors who met criteria for burnout in 2012 and completed the 2016 survey also met criteria for burnout in 2016, while only 12% of those who were not burned out in 2012 were found to be burned out in 2016. Little is known about the stability of burnout or resiliency in individual physicians, so better understanding of what contributes most to individual physicians transitioning into and out of burned-out states deserves further investigation.

This study has limitations. Our survey response rates ranged from 62%-80%, and our nonresponders differed slightly from responders, so it is possible that our results and conclusions might have changed with a higher survey response rate. Our sample sizes were also limited by the number of internal medicine program directors nationally and by the response rate; it is therefore possible that our study lacked the power to detect potentially relevant associations between burnout and program director demographics or program characteristics. Our data did not include assessment of work-home conflicts, which was previously found to be associated with program director burnout.⁷

In conclusion, we found a stable rate of burnout over time and a stable but concerning rate of turnover among internal medicine program directors. We also found significant associations between program director burnout and turnover and consideration of resigning and subsequent departure from the program director role. Areas for further investigation include studying the explanations program directors give for considering resigning, exploring the potential impact of program director burnout and turnover on residency programs, and studying potential interventions aimed at reducing burnout and increasing program director tenure and satisfaction.

ACKNOWLEDGMENTS

We are grateful for the support of the Association of Program Directors in Internal Medicine (APDIM), the members of the APDIM Survey Committee, and the residency program directors who completed the APDIM survey. This paper does not constitute an official policy statement of APDIM, the APDIM Council, or any other organization with which any of the authors may be affiliated. The Mayo Clinic Survey Research Center provided assistance with the survey design and data collection. This study was supported in part by the Mayo Clinic Internal Medicine Residency Office of Educational Innovations as part of the ACGME Educational Innovations Project.

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