

## AAIM Perspectives

AAIM is the largest academically focused specialty organization representing departments of internal medicine at medical schools and teaching hospitals in the United States and Canada. As a consortium of five organizations, AAIM represents department chairs and chiefs; clerkship, residency, and fellowship program directors; division chiefs; and academic and business administrators as well as other faculty and staff in departments of internal medicine and their divisions.

# Do Current Hiring Processes for Residency Program Directors and Associate Program Directors Foster Diversity in Educational Leadership?



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Residency program and associate program directors (PDs and APDs) hold highly visible educational leadership roles with the power to influence residency training, hospital operations, and the future physician workforce.<sup>1,2</sup> They are the leaders of the educational missions of medical schools and teaching hospitals.<sup>1</sup> As health care strives to create a more diverse workforce, diversity in leadership positions is foundational to meeting this goal.<sup>3-5</sup> Recent publications have described the lack of gender and racial diversity in academic medicine leadership roles.<sup>3,6-9</sup> In 2022, 46.7% of internal medicine residency PDs were women,<sup>10</sup> but the number of PDs who self-identify as underrepresented in medicine (URiM) is not known, and less is known about APD gender and diversity.

Because educational leaders have a direct impact on future physicians, the individuals in PD and APD roles

are important role models to both trainees and faculty.<sup>1,4,6,11,12</sup> Surveys of women and URiM medical students suggest that leadership characteristics matter in choosing a residency program, as trainees want supervisors from a shared background who can empathize and serve as role models.<sup>11,13-15</sup> For faculty, seeing individuals like themselves in leadership roles demonstrates career advancement opportunities, which is important for retaining women and URiM faculty.<sup>4,14,16</sup>

There are many reasons for the lack of diversity in academic leadership, including work-life tensions, unequal committee work, a dearth of mentorship, and implicit biases.<sup>5,6,17</sup> Another possibility that has not been explored is the hiring process. How faculty obtain PD and APD positions has not been evaluated systematically. At a local level, institutional leaders make decisions about whether to implement a search process (involving a job posting and interviews) or to simply offer the position to someone without a search. There are reasons for both hiring processes, but whether the type of hiring process influences who is hired is not known. Evaluating hiring processes of PDs and APDs at a national level may help better understand how

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individuals move into these leadership roles and whether the hiring process promotes diversity.

Through a nationally representative, annually recurring survey of US internal medicine PDs, we sought to describe the hiring processes for PDs and APDs and to determine which process they feel is most desirable and which they use to hire APDs.

## METHODS

### Study Settings and Participants

The Association of Program Directors in Internal Medicine (APDIM) is a founding organization of the Alliance for Academic Internal Medicine (AAIM), a professional association that represents over 12,000 internal medicine faculty and staff. The APDIM Survey and Scholarship Committee oversees the development of an annual research survey of internal medicine residency PDs to study issues central to graduate medical education training. In addition to a section about residency program characteristics that generally remains static, the survey includes thematic sections that vary annually.

In April 2019, a call for thematic survey proposal submissions was disseminated online to all APDIM members. In October 2019, the APDIM Survey Committee blind reviewed question section proposals, scored them on merit and relevance, and selected 3 for inclusion in the survey, including “Hiring Process.” In Winter 2020, the survey committee elected to defer all survey sections to 2021 so that the 2020 Annual Survey could focus on the effects of COVID-19.

The 2021 Annual Program Directors Survey was disseminated to PDs from all 439 APDIM member residency programs with “initial” or “continued” accreditation status with the Accreditation Council for Graduate Medical Education (ACGME) prior to July 1, 2020. At the time of the study, APDIM member programs represented 80.4% of residency programs with ACGME accreditation prior to that date.

### Survey Instrument

The complete survey methods, conducted similarly since 2018, have been previously described.<sup>18,19</sup> In February 2021, the APDIM Survey Committee appointed section development co-contributors based

on relevant experience. Question revisions, committee pretesting of the complete instrument, and further content revisions occurred through June 2021, during which time the project personnel programmed the instrument in the Qualtrics Surveys platform (version XM, North Sydney, Australia). From late June through mid-July, the web survey was pilot-tested for content validity by the survey committee and by the AAIM Research Committee (consisting of experts in graduate medical education, blinded to the Survey Committee). Final revisions were then made to the instrument. The survey landing page served as the study’s informed consent page. The study (#21-AAIM-119) was deemed exempt by Pearl IRB (US DHHS OHRP #IRB00007772) under 45 CFR 56.104(d), category 2.

The section on hiring process included 32 questions (some with sub-questions) with conditional skip or display patterns and validation where applicable ([Appendix](#)). Question types included multiple choice, 5-point Likert scale, numeric entry, write-in responses for questions with an option for “other,” and open-ended essay questions. Program directors were asked to report the number of APDs in their program at the time of the survey; select questions about APD characteristics and hiring processes were then re-presented to respondents based on the number of APDs they reported.

The survey launched on August 17, 2021 included 5 email reminder messages to nonrespondents, and closed on December 7, 2021. The email invitation and all email reminders included opt-out links for individuals who did not wish to participate in the survey. No participation incentives were offered. Only AAIM Surveys staff had access to the survey platform and dataset and contacts during fielding.

### Statistical Analysis

Data analysis was conducted in Stata 16.1 SE (College Station, Texas) by staff. Before de-identifying the final responses for analysis, the study dataset was appended with data from external sources including essential residency program characteristics.<sup>20-23</sup> For analysis purposes, we combined response options to the question about how the residency PD was selected: “national, local, and internal” searches were coded into a single category of “search,” and “selected by organizational leadership” and “selected by prior PD without organizational leadership” were coded into a separate category. We tested for associations between categorical

## PERSPECTIVES VIEWPOINTS

- Diversity in educational leadership matters; residency and associate program directors influence future physician workforces.
- How individuals obtain these leadership positions has yet to be systematically studied.
- The majority of program and associate program directors were selected for their positions; however, most program directors hold the position that the ideal hiring process is a search. There is limited diversity in these leadership roles.
- Departments may want to be mindful of their hiring process.

variables using the adjusted Wald (Pearson) test of association (with 1 degree of freedom). Because the total APDs and APD characteristics reported exceeded the number of survey respondents, we reported Sidak-adjusted  $P$  values for adjusted Wald tests between categorical variables (to account for the confounding effect of multiple comparisons). Due to the nonparametric distribution of certain continuous variables in our dataset, we used the Mann-Whitney U test for comparisons of dichotomous variables by groups, reporting means and standard deviations with medians and interquartile ranges (IQRs). To compare continuous variables to questions about APD characteristics that exceeded the number of survey respondents, we used a multivariate test of means (Hotelling T2 with 2 degrees of freedom). Statistical significance was designated with an alpha level set to  $P \leq .05$ . Due to survey conditional logic or item non-response, denominators reported for certain questions will not necessarily sum to the total number of survey respondents.

## RESULTS

### Program Directors

The survey response rate was 60.8% (267 of 439 survey-eligible PDs). There was no statistical association between respondents and nonrespondents based on survey population characteristics as previously published.<sup>19</sup> Of the PDs who reported how they were hired, 55% were selected for their position without any type of search process, defined in this manuscript as “select” (Table 1). Of the 44.0% hired by a search process, 49% were hired by a national search and 51% by a local or internal search, defined in this manuscript as “search.” Thirty-four percent of PDs self-identified as non-white; of those 87, 6.6% self-identified as URiM. Comparing any search process to selection, there were no associations between hiring process and PD characteristics including gender, self-identity, tenure in position, or age. Although we could not confirm a likely association, a higher percentage of women PDs than men were hired through a search.

Residency programs with a larger number of approved positions were associated with selecting a PD rather than using a search (median 59 residents [IQR 62] vs median 42 residents [IQR 47],  $P = .01$ ) (Table 1). Compared with all other program types, university-based programs also had a higher association with selecting PDs vs using a search (65.3% vs 34.7%,  $P < .01$ ). There were no associations between hiring process based on US Census region or gender of the department chair.

Nearly 80% of PDs held a prior residency leadership position, including APD, PD, or interim PD. Among those, more were likely to be selected for

their PD position vs being hired with a search (83.7% vs 74.6%,  $P = .03$ ) (Table 2). More than half of PDs (64.5%) did not train in the program they currently lead. Over half (55.4%) of PDs were mentored for the PD role, and among those mentored, 62.5% were mentored for over a year before taking the position. There was no association between mentorship and the type of hiring process. Most PDs (80.9%) would ideally use a search to find their replacement, although among individuals selected for their position, a higher percentage reported that they would choose selection over search for their replacement (26.2% vs 10.3%,  $P = .01$ ).

### Associate Program Directors

Program directors provided information about 832 APDs, including the number of APDs (Appendix Table). Figure 1 shows the number of APDs per program based on ACGME approved resident positions. More than half (51.5%) of APDs were women and 15.0% were identified as URiM by the reporting PD (Table 3). Program directors hired 68.1% (567/832) of the APDs in their programs with the remainder of APDs being present when the PD took the role. Of those hired by the PD, only 38.9% (213/548) went through a search process. Program directors with a longer tenure were more likely to select APDs, but there were no associations between the hiring process based on PD gender, APD gender, or APD racial identity. (Table 4A). Program directors from university programs were more likely to select an APD compared with those from other program types (56% vs 40.3%,  $P = .03$ ), but there were no associations based on other program characteristics, including program size and number of APDs. (Table 4B). Program directors hired by a search were more likely to use a search to hire their APDs (55.4% vs 42.9%,  $P = .03$ ), and those PDs hired by selection were more likely to select APDs (38.1% vs 20.7%,  $P = .02$ ). Although more PDs reported that the ideal process for hiring APDs was a search, PDs who were hired by a search unanimously believed a search was the ideal hiring process (100% vs 0,  $P < .001$ ).

One of the top reasons reported for using both search and selection processes for PDs and APDs was “standard practice at our institution” (Table 5). For those who used a search, additional reasons included public acknowledgement of the position as a leadership role and the possibility of no internal candidates. For those using selection, additional reasons included concerns about disruption to current residents and lack of time for job posting and interviews. A common reason for the search process for APDs was to encourage faculty to come forward. A common reason to select was that the individual hired had a unique recognized skillset.

**Table 1** Residency Program Director and Program Characteristics by Hiring Process

Characteristic	Search: National, Local, or Internal (n = 118) n (%)	No Search: Selected by Leadership or Prior PD (n = 147) n (%)	Total (n = 265) n (%)	P Value*
<b>PDs</b>				
Self-reported gender				
Woman	62 (52.5)	62 (42.2)	124 (46.8)	.12
Man	56 (47.5)	85 (57.8)	141 (53.2)	
Completed residency training at hiring program				
Yes	37 (31.4)	57 (38.8)	94 (35.5)	.31
No	81 (68.8)	90 (61.2)	171 (64.5)	
Self-identity (n = 115, n = 142, n = 257)				
White only	75 (65.2)	95 (66.9)	170 (66.2)	.67
Non-white	40 (34.8)	47 (33.1)	87 (33.9)	
URiM	9 (7.8)	8 (5.6)	17 (6.6)	.48
Not URiM	106 (92.2)	134 (94.4)	240 (93.3)	
Type of candidate				
External — no affiliation	41 (34.8)	7 (4.8)	48 (18.1)	<.01
External — prior affiliation	6 (5.1)	5 (3.4)	11 (4.2)	.55
Internal	71 (60.2)	135 (91.8)	206 (77.7)	<.01
<b>Quantitative</b>	<b>Median (IQR)</b>	<b>Median (IQR)</b>	<b>Median (IQR)</b>	<b>P value†</b>
Tenure in years (ACGME)	4 (5)	5 (6)	4 (6)	.37
Age in years	49 (12)	50 (13)	50 (12)	.87
<b>Program characteristics</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>P value*</b>
Program size: no. of ACGME approved positions (median, IQR)	42 (47)	59 (62)	52 (62)	.01
Program type (AMA)				
University-based	34 (28.8)	64 (43.5)	98 (37.0)	<.01
Community-based	22 (18.6)	23 (15.7)	45 (17.0)	.54
Community-based, university-affiliated	59 (50.0)	60 (40.8)	119 (44.9)	.09
Military-based	3 (2.5)	0 (—)	3 (1.1)	.21
Census region (US Census Bureau)‡				
Northeast	38 (32.2)	42 (28.6)	80 (30.2)	.47
Midwest	23 (19.5)	35 (23.8)	58 (21.9)	.20
West	22 (18.6)	18 (12.2)	40 (15.1)	.25
South	35 (29.7)	52 (35.4)	87 (32.8)	.46
Department chair gender				
Woman	34 (29.8)	35 (23.8)	69 (26.4)	.43
Man	80 (70.2)	112 (76.2)	192 (73.2)	

ABIM = American Board of Internal Medicine; ACGME = Accreditation Council for Graduate Medical Education; AMA-FREIDA = American Medical Association Residency and Fellowship Database; IQR = interquartile range; SD = standard deviation; URiM = underrepresented in medicine; VA = Veterans Affairs.

\*Adjusted Wald (Pearson) test of association with 1 degree of freedom.

†Mann-Whitney U test.

‡Collapses 1 program from a US territory into “West,” due to small cell sizes and data confidentiality. Two respondents reported “Unsure” to the question about how they were hired for their program director position.

## DISCUSSION

To our knowledge, this is the first nationally representative survey on the hiring process of internal medicine educational leaders demonstrating heterogeneity in the hiring of PDs and APDs. Program director and associate program director positions are more commonly filled by selection than a search process. Large university-based programs are more likely to select individuals, and the PD's own hiring process is associated with the process used to hire APDs. The hiring process

chosen was considered standard practice at most institutions. Finally, regardless of how they were hired, most PDs reported to believe that the ideal hiring process for both a successor PD and APDs is a search.

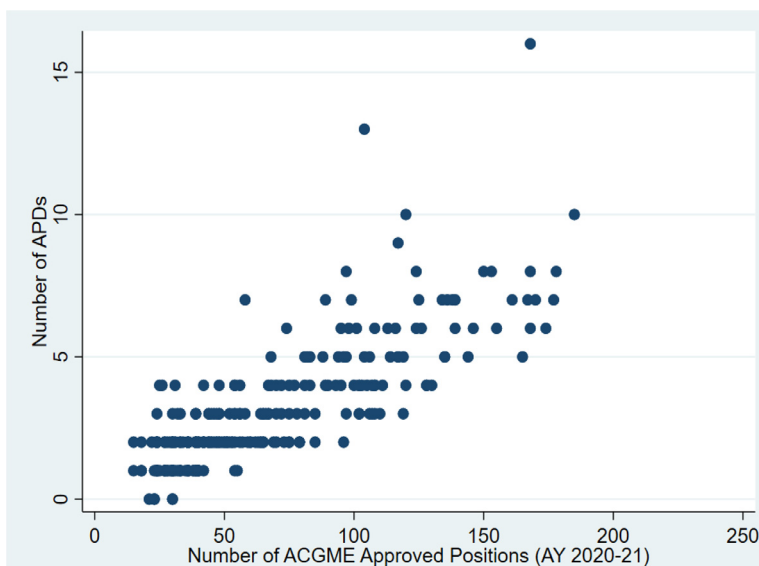
Program director and associate program director are highly visible leadership roles charged with the recruitment and professional development of the next generation of physicians.<sup>1,2,11,12,15,24</sup> National physician organizations have called for a diverse workforce,<sup>25,26</sup> as concordance between patients and providers improves patient care.<sup>11,27-30</sup> Diversity in leadership is

**Table 2** Program Director Experience by Hiring Process

	Search: National, Local, or Internal (n = 118) n (%)	No Search: Selected by Leadership or prior PD (n = 147) n (%)	Total (N = 265) n (%)	P Value*
Position immediately prior to being hired as PD				
APD/PD/interim PD/assistant PD	88 (74.6)	123 (83.7)	211 (79.6)	.03
Faculty (non-residency leadership)	38 (32.2)	34 (23.1)	72 (27.2)	.13
Other roles (eg, fellowship PD)	25 (21.2)	36 (24.5)	61 (23.0)	.55
Mentored or trained to be successor (n = 117, n = 143, n = 260)				
Yes	61 (52.1)	83 (58)	144 (55.4)	.30
No	56 (47.9)	60 (42)	116 (44.6)	
When mentorship occurred (n = 61, n = 83, n = 144)				
Once offered the position	16 (26.2)	15 (18.1)	31 (31.5)	.45
Less than 1 year before offer	8 (13.1)	15 (18.1)	23 (16.0)	.45
More than 1 year before offer	37 (60.7)	53 (63.9)	90 (62.5)	.81
PD satisfaction with hiring process				
Somewhat/very dissatisfied	17 (14.4)	10 (6.8)	27 (10.2)	.02
Neutral	26 (22.0)	50 (34.0)	76 (28.7)	.04
Somewhat/very satisfied	75 (63.6)	87 (59.2)	162 (61.1)	.59
Process PD would select to hire successor (n = 116, n = 141, n = 257)				
National search (external/internal candidates)	57 (49.1)	54 (38.3)	111 (43.2)	.08
Local or internal search (internal candidates)	47 (40.5)	50 (35.5)	97 (37.7)	.53
No search	12 (10.3)	37 (26.2)	49 (19.1)	.01
PD belief that hiring process fulfills institution's diversity missions (n = 115, n = 147, n = 262)				
No extent or small extent	53 (46.1)	78 (53.1)	131 (50.0)	.27
Moderate extent	41 (35.7)	46 (31.3)	87 (33.2)	.36
Great extent or fullest extent	21 (18.3)	23 (15.7)	44 (16.8)	.68

APD = associate program director; PD = program director.

\*Adjusted Wald (Pearson) test of association with 1 degree of freedom.

**Figure 1** Number of associate program directors in comparison with residency program size.

ACGME = Accreditation Council for Graduate Medical Education; APD = associate program director; AY = academic year. Correlation coefficient: number of APDs and ACGME approved positions (AY 2020-21): 0.80. For 267 survey respondents.



**Table 3** Associate Program Director Characteristics Reported by Program Director

Respondents (n = 262)	n (%) for a total of 832 APDs
Salary support for APDs	
No FTE support	8 (1.0)
>0 to <0.09 FTE	19 (2.3)
0.1 to 0.29 FTE	356 (42.8)
0.3 to 0.49 FTE	231 (27.8)
0.5 FTE or greater	218 (26.2)
Gender of APD (n = 261)	(n = 829)
Woman	427 (51.5)
Man	402 (48.5)
APD by URiM status	
URiM	130 (15.6)
No URiM	690 (82.9)
Unknown	12 (1.4)
APDs hired by current PD	
No	265 (31.9)
Yes	567 (68.1)

APD = associate program director; FTE = full-time equivalent; PD = program director; URiM = underrepresented in medicine. For 262 survey respondents who reported that their residency program included 1 or more APDs. Percentages are based on a total of 832 APDs reported by respondents.

an essential step in achieving this goal. Diverse educational leaders can serve as role models and mentors and demonstrate a career path for younger physicians.<sup>6,11,14,31-33</sup>

There is a known lack of diversity in academic leadership roles.<sup>3,6</sup> This study found 46.8% of PDs and 51.5% of APDs are women. However, racial diversity is lagging, with only 6.6% of PDs self-identifying as URiM, but encouragingly more APDs (15.6%) were reported as URiM. Although such low numbers may reflect the demographics of the physician workforce, it highlights that much work needs to be done to promote diversity in academic leadership.<sup>6,9,34,35</sup> Additionally, because larger university programs are more likely to select PDs, they are limiting their potential for diversity to the already less diverse environs of their own institutions. Eighty percent of PDs reported their immediate past position to be APD or prior PD. Because the APD position appears to be a pipeline for PDs, there is hope that diversity of PDs will increase over time.

Although we did not find an association between the hiring process used for PDs or APDs and gender or self-identity, a higher percentage of women were hired through a search compared with their male colleagues. Implicit gender biases that favor men over women for leadership roles can impact decision-making and the hiring of women.<sup>16,36,37</sup> Focusing on the hiring process may have an effect on leadership diversity for both women and URiM individuals.<sup>32</sup> With ACGME requirements specifically addressing diversity, equity, and inclusion practices, moving toward a search

process for leadership positions could be one means of meeting these requirements.<sup>38</sup>

The business literature strongly favors a search process, especially posting a job internally and hiring from within.<sup>39-41</sup> A search process has many benefits, including maintaining a culture of openness and transparency regarding advancement opportunities and is associated with greater employee satisfaction and retention.<sup>40,42,43</sup> Selecting individuals for a position risks alienation of current employees seeking growth and professional development and can increase risk of legal issues as promotions are covered by federal and state employment and non-discrimination laws.<sup>40,44,45</sup> Search processes provide younger individuals, URiM and women faculty with more visible pathways for career advancement.<sup>5,6,45,46</sup> This mirrors the reasons PDs in the study reported for using a search process, including to encourage faculty to come forward and to recruit a diverse group of candidates. With nearly 80% of PDs reporting a search as the ideal way to hire their replacement and APDs, the search process in medicine is recognized as favorable.

There are no legal requirements that leadership roles must be advertised or how they should be filled.<sup>39,44</sup> Our results indicate that selection is more common particularly in larger university programs and by PDs with longer tenure. Why one process is used over another is unclear. The most common reason reported by PDs for using selection is concern about disruption to residents. This concern may explain why the overwhelming majority of PDs were prior APDs, as this likely promotes program stability. Other reasons for selection included lack of time for job posting and interviews, which can require more expense and time.<sup>6</sup> Finally, selection allows PDs to hire an APD with a unique skillset perhaps promoting diversity. We can only conjecture why larger university programs tend to select educational leaders, but perhaps with more faculty to choose from and more APDs in the pipeline they can identify individuals with unique skillsets more easily than smaller programs.

It is interesting that PDs reported “this is standard practice at my institution” for both hiring processes, suggesting that hiring processes are determinants at an institutional level rather than by an individual leader. However, prior experience of a hiring process matters, as more PDs hired by a search chose to use a search for their APDs and 100% of PDs hired by a search identified search as the ideal process for hiring APDs. PDs hired by selection were more likely to choose selection for their replacements.

Succession planning is used in business to identify individuals for future roles and provide job training and mentorship.<sup>42</sup> More than half of PDs were mentored for their role and over 60% of those were mentored for more than 1 year. Given that nearly 80% of PDs held a residency leadership position prior to

**Table 4A** Hiring Practices of Associate Program Directors: Program Director and Associate Program Director Characteristics

220 Responding PDs (n = number of responses)			Self-Reported PD Gender No. (%)			PD Tenure in Years (ACGME)		Hiring Process for PD No. (%)			APD Gender, No. (%)			APD is URiM, No. (%)		
Type of search processes for APDs	No. PDs reporting on hiring process	APDs by hiring process, No. (%)	F	M	<i>P</i> <sup>‡</sup>	Mean (SD)	<i>P</i> <sup>§</sup>	Search: national, local, internal	No Search	<i>P</i> <sup>‡</sup>	F	M	<i>P</i> <sup>‡</sup>	N	Y	<i>P</i> <sup>‡</sup>
Any form of search	105	213 (38.9)	49 (50.0)	56 (45.9)	.312	6.1 (4.6)	.003	51 (55.4)	54 (42.9)	.030	86 (47.3)	19 (50.0)	.707	64 (49.2)	41 (46.1)	.594
Selected by organizational leadership (no search)	68	114 (20.8)	28 (28.6)	40 (32.8)	.580	7.1 (6.1)		19 (20.7)	48 (38.1)	.019	58 (31.9)	10 (26.3)	.454	3 (28.5)	31 (34.8)	.339
Selected by PD (no search)	103	221 (40.3)	46 (46.9)	57 (46.7)	.975	6.8 (6.1)		38 (41.3)	64 (50.8)	.377	87 (47.8)	16 (42.1)	.543	58 (44.6)	44 (49.4)	.204
No. of respondents	220*	220	98	122	—	220	—	92	126	—	182	38	—	130	89	—
No. of responses	276 <sup>†</sup>	548	123	153	—	276	—	108	166	—	231	45	—	159	116	—

ACGME = Accreditation Council for Graduate Medical Education; APD = associate program director; PD = program director; URiM = underrepresented in medicine.

\*Some totals will not equal “220,” due to item non-response or respondents who reported “Do not know” or “Unsure” to the survey question.

<sup>†</sup>Percentages reflect the number of PD responses for a given item divided by the absolute number of respondents to each question. For example, among 91 respondents from university-based programs, 47 (51.7%) represented programs whose APDs were selected through any form of search, 32 (35.2%) represented programs whose APDs were selected by organizational leadership, and 51 (56.0%) represented programs whose APDs were selected by the PD. Thus, percentages will exceed “100.”

<sup>‡</sup>*P* value: Adjusted Wald (Pearson) test of association with one degree of freedom (Sidak-adjusted *p*-values).

<sup>§</sup>*P* value: Multivariate test of means: Hotelling T<sup>2</sup>.

**Table 4B** Hiring Practices of Associate Program Directors: Program Characteristics and Program Director Beliefs

220 Responding PDs (n = Number of Responses)		No. of APDs in Program		Program Size: No. of ACGME Approved Positions		Program Type (AMA) in Two Categories, No. (%)			PD's Belief About the Ideal Process for Hiring APDs, No. (%)			PD's Belief: Extent to which hiring process fulfills institution's diversity mission, No. (%)			
Type of search processes for APDs	No. of PD responses	Mean (SD)	<i>P</i> <sup>‡</sup>	Mean (SD)	<i>P</i> <sup>‡</sup>	University-based	All other types	<i>P</i> <sup>§</sup>	Search	No search	<i>P</i> <sup>‡</sup>	No or small extent	Moderate extent	Great extent	<i>P</i> <sup>**</sup>
Any form of search	105	3.3 (1.7)	.438	76.4 (46.5)	.887	47 (51.7)	58 (45.0)	.349	103 (59.5)	0 (—)	<.001	35 (40.2)	54 (58.7)	15 (38.5)	.047
Selected by organizational leadership (no search)	68	3.2 (1.6)		76.3 (39.8)		32 (35.2)	36 (27.9)	.202	45 (26.0)	22 (50.0)	.022	31 (35.6)	24 (26.1)	12 (30.8)	.455
Selected by PD (no search)	103	3.4 (1.6)		75.4 (29.1)		51 (56.0)	52 (40.3)	.028	74 (42.8)	26 (59.1)	.045	47 (54.0)	39 (42.4)	17 (43.6)	.261
No. of respondents	220*	220	—	220	—	91	129	—	173	44	—	87	92	39	—
No. of responses	276 <sup>†</sup>	548	—	548	—	130	146	—	222	48	—	113	117	44	—

ACGME = Accreditation Council for Graduate Medical Education; AMA = American Medical Association; APD = associate program director; PD = program director; SD = standard deviation; URiM = underrepresented in medicine.

\*Some totals will not equal “220,” due to item non-response or respondents who reported “Do not know” or “Unsure” to the survey question.

<sup>†</sup>Percentages reflect the number of PD responses for a given item divided by the absolute number of respondents to each question. For example, among 91 respondents from university-based programs, 47 (51.7%) represented programs whose APDs were selected through any form of search, 32 (35.2%) represented programs whose APDs were selected by organizational leadership, and 51 (56.0%) represented programs whose APDs were selected by the PD. Thus, percentages will exceed “100.”

<sup>‡</sup>*P* value: Multivariate test of means: Hotelling T<sup>2</sup>.

<sup>§</sup>*P* value: adjusted Wald (Pearson) test of association with 1 degree of freedom (Sidak-adjusted *P* values).

<sup>\*\*</sup>*P* value: adjusted Wald (Pearson) test of association with 2 degrees of freedom (Sidak-adjusted *P* values).

**Table 5** Top Reasons for Hiring Process for Program Directors and Associate Program Directors

	No. (n = 147)*	Percent
PD no search (selection)		
Standard practice at institution	50	34.0
Concerns about disruption to current residents with change in leadership	63	42.9
Lack of time for job posting and interview process	35	23.8
Other	38	25.9
PD search (n = 115)*		
Standard practice at institution	68	59.1
To publicly acknowledge position as a local leadership role	20	17.4
Possibility that there was no internal candidate to select	18	15.7
Concern about disruption to current residents with change in leadership	17	14.8
APD no search (selection) (n = 142) <sup>†</sup>	(n = 313)* <sup>‡</sup>	
Standard practice at institution	93	29.7
Individual hired had unique skillset for position	221	70.6
Concern about disruption to current residents with change in leadership	40	12.8
Other	37	11.8
APD search (n = 105) <sup>†</sup>	(n = 213)* <sup>‡</sup>	
Standard practice at institution	86	40.4
To encourage faculty to come forward	102	54.5
To acknowledge role as leadership position	99	46.4
To recruit a diverse group of candidates	69	36.8

APD = associate program director; PD = program director.

\*Respondents were allowed to select multiple options: total percentage will exceed 100.

<sup>†</sup>"n=" refers to absolute number of respondents to the question.

<sup>‡</sup>Total (n =) is based on number of APDs reported upon by each respondent and will therefore exceed number of survey respondents. For example, of 313 APDs reported by 142 respondents to have been hired without a search, 93 (29.7%) were reported to have been hired as a "standard practice."

becoming PD, APDs are the pipeline in succession planning. How APDs are hired becomes important as they represent a pathway for a career in educational leadership. Additionally, given the median tenure for PDs is only 4 years and with 54.2% of PDs reporting to have considered resigning in the past year, institutions must frequently hire PDs and likely choose from this APD pool.<sup>10</sup> Although term limits have been suggested as a way to improve diversity in academic leadership, the short median tenure of PDs suggests that term limits will not help with improving diversity of PDs.<sup>6</sup> This

study suggests that the hiring process is more important to consider.

This study is not without limitations. Survey research inherently is subject to some degree of error and bias based on factors including but not limited to response rate, item non-response, respondent error (eg, misinterpretation of questions or other items), recall bias, and construct validity. Our analysis separated the hiring processes into search vs selection; however, hiring may be more nuanced. An individual might be selected for a position, but the position is advertised briefly with limited interviews, due to hospital policy. As a result, we might not have fully captured the characteristics of the hiring process, especially the use of searches. Finally, although it was a nationally representative survey, the numbers may still be too small to detect subtle differences in the diversity of the hiring process.

## CONCLUSION

Diversity in educational leadership is essential. Institutions and departments should be mindful of the hiring process for educational leadership positions including PDs and APDs. As health care strives to promote diversity in leadership, considering how individuals move into these positions likely matters. Given that hiring processes are often standardized at an institution, creating a formal process for all educational leadership positions suggests that there is an opportunity to enact fundamental change with a potential for substantial improvements in diversity. How a PD is hired, in turn, affects how he or she hires APDs; thus, standardizing a hiring process is an intervention that could have a lasting effect. Future studies monitoring whether APD diversity leads to more PD diversity and evaluating hiring processes to promote diversity would be of great benefit.

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## SUPPLEMENTARY DATA

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.amjmed.2023.09.001>.

## APPENDIX

### A. Survey Questions

#### 2021 APDIM Annual Fall Survey of Residency Program Directors: Survey Landing Page and Instrument for Section IV: “Hiring Practices for Program and Associate Program Director Positions”

##### APDIM Annual Survey of Internal Medicine Residency Program Directors Fall 2021

Welcome! APDIM Surveys collect representative data on graduate medical education in internal medicine (IM) and provide residency program directors (PDs) with critical trend data on their discipline. Survey results are presented at academic medicine professional conferences, in virtual forums and scholarly works, and as summary reports at *IM.org*. **Immediately after submitting your responses you will receive them by email.**

This study (#21-AAIM-119) is exempt by Pearl IRB (U.S. DHHS OHRP #IRB00007772) under FDA 21 CFR 56.104 and 45CFR46.104(b)(2). You are invited to participate as a residency PD whose program was ACGME-accredited prior to the previous Academic Year (before July 1, 2020) and holds APDIM membership. **Participation is voluntary:** refusal to participate will not affect your/your program’s APDIM membership. The survey software will alert you if you leave questions empty but you may skip any you cannot / do not wish to answer.

**Your responses are confidential.** No results containing identifiers of you/your program will be published in scholarly works or summary results. Upon survey closure, all personal and program identifiers will be removed by Alliance for Academic Internal Medicine (AAIM) Surveys staff, who serve as principal investigators and manage data collection.

**If you encounter technical problems, no longer are your institution’s residency PD, or have questions about this survey,** please contact AAIM Surveys staff at [surveys@im.org](mailto:surveys@im.org) or 703-341-4540. If you feel that your participant rights have not been upheld, contact Pearl IRB at [info@pearlirb.com](mailto:info@pearlirb.com) or 317-602-5917.

Expect to allocate about **10 minutes to Section I** and **25 minutes to the remaining sections (possibly less time, depending on your responses)**. *If necessary, you may exit and return later without losing your data.* Please use the unique survey link in your email invitation; you will be returned to where you left off. **DO NOT USE** your browser’s “Back” or “Forward” buttons to navigate the survey: *you must use the <BACK and NEXT> buttons at the bottom of each page.*

##### **\*\*SURVEY NAVIGATION\*\***

1. This survey is compatible with most tablet devices but if you encounter technical problems check that your device’s operating system is updated. **Smartphone use is discouraged** due to programming that might cause navigation problems.
2. Unless otherwise specified, this survey applies to the most recently completed academic year (AY). Consider anybody enrolled or participating in your residency training program on **December 31, 2020** as part of that AY.
3. Questions apply to IM residents in a three-year training program and unless otherwise specified, **do not apply to** 1. trainees in a transitional year or preliminary program or 2. subspecialty fellows or trainees from programs not included in your ACGME program number.
4. Ready access to your program characteristics will help with survey completion. **A PROGRAM COORDINATOR(S) OR ASSOCIATE PROGRAM DIRECTOR(S) MAY COMPLETE MOST OF SECTION I.** Share your unique survey URL with caution and please **check** the information entered by others.

*By clicking below, you acknowledge that your participation is voluntary.*

- Click “PROCEED” (below) to begin

Display This Question:

*If Click “PROCEED” is blank*

*Do you acknowledge that your participation is voluntary?*

- **Yes: BEGIN survey**
- **No (you will EXIT and not be able to return)**

*Skip To END if “NO” is selected*

#### **Section IV. Hiring Practices for Program and Associate Program Director Positions**

**Q1. How do you self-identify?\* Check all that apply.**

- American Indian or Alaska Native
- Black or African American

- Hispanic, Latino, or of Spanish origin
- Native Hawaiian or Other Pacific Islander
- East Asian (e.g., Chinese, Japanese, Korean)
- South Asian (e.g., Indian, Pakistani)
- Southeast Asian (e.g., Cambodian, Filipino, Vietnamese)
- White
- Other (please specify): \_\_\_\_\_
- ☐ Unsure
- ☐ Do not wish to answer

**\*U.S. Census Bureau. *Population Estimates Program and American Community Survey.***

**Q2. How were you hired for your program director (PD) position?**

- National search: external and internal candidates with job posting and interviews
- Local search: external and internal candidates within a university system, city, or region, with job posting and interviews
- *Internal only* search: within the hospital / clinics serving the training program with job posting and interviews
- *No search*: selected by organizational leadership (e.g., department chair, vice-chair, supervisor, DIO [designated institutional official], immediate prior PD, or a combination of these)
- *No search*: selected by immediate prior PD *only* without organizational leadership input
- Other (please explain): \_\_\_\_\_
- Unsure

*Display This Question:*

*If Q2 = "No Search: selected by organizational" or "No search: selected by immediate" or "Other"*

**Q3. Why do you think that this hiring process was utilized? Check all that apply.**

- Standard practice at our institution for educational leadership positions
- Lacked time for job posting and interview process
- Lacked financial resources for job posting and interview process
- Concern about disruption to current residents with change in leadership
- Concern about changes for interview season and resident matching
- Other (please explain): \_\_\_\_\_
- ☐ Do not know / Unsure

*Display This Question:*

*If Q2 = "No Search: selected by organizational" or "No search: selected by immediate" or "Other"*

**Q4. Why do you think that this hiring process was utilized? Check all that apply.**

*Display This Choice:*

*If Q2 = "National search"*

- To publicly acknowledge position as a national leadership role

*Display This Choice:*

*If Q2 = "National search" or "Local search" or "Internal only search"*

- To publicly acknowledge position as a local leadership role
- Standard practice at our institution for educational leadership positions
- Possibility that there was no internal candidate to select
- Concern about disruption to current residents with change in leadership
- Concern about changes for interview season and resident matching
- Other (please explain): \_\_\_\_\_
- ☐ Do not know / Unsure

**Q5. Just to confirm, which type of candidate were you?**

- External candidate never affiliated with hospital or institution at which you now are PD
- External candidate formerly affiliated with hospital or institution at which you now are PD
- Internal candidate
- Other (please explain): \_\_\_\_\_

**Q6. Prior to becoming PD, were you mentored (or trained) to be the successor for the PD position?**

- No
- Yes
- Unsure

*Display This Question:*

*If Q6 = "Yes"*

**Q7. When did you receive that mentoring (or training)?**

- Once I was officially offered the position
- Less than one year before being officially offered the position
- More than one year before being officially offered the position

**Q8. Did you complete residency training at the program for which you are PD?**

- No
- Yes

*Display This Question:*

*If Q2 = "National search" or "Local search" or "Internal only search"*

**Q9. Why do you think that you were selected as PD? Check all that apply.**

*Display This Choice:*

*If Q2 = "National search" or "Local search"*

*Or If Q5 = "External candidate never" or "External candidate formerly"*

- Was considered most qualified among external candidates who applied
- Was considered most qualified among internal candidates who applied
- To increase the diversity of the program leadership

*Display This Choice:*

*If Q5 Does not equal "Internal candidate"*

- To bring an outside perspective to the institution
- No other candidate would accept the position
- Program stability (e.g., new chair or institutional leadership wanted a candidate known to program)
- Program succession planning
- Other (please explain): \_\_\_\_\_
- ☒ Unsure (please explain why you are unsure): \_\_\_\_\_

*Display This Question:*

*If Q2 = "No Search: selected by organizational" or "No search: selected by immediate" or "Other"*

**Q10. Why do you think that you were selected as PD? Check all that apply.**

- Program succession planning
- Was most qualified faculty member at my institution
- No other candidate would accept the position
- Program stability (e.g., new chair or institutional leadership wanted a candidate known to program)
- Recruited to hospital/institution and this was part of contract package negotiation
- I am currently interim PD with search in progress
- Was interim PD and then offered position permanently
- Other (please explain): \_\_\_\_\_
- ☒ Unsure

*Display This Question:*

*If Q10 = "I am currently" and "Was interim PD"*



**Q11. To clarify: you reported “I am currently interim PD with search in progress” and “Was interim PD and then offered position permanently” above. Please correct your response if this was in error.**

**Q12. Immediately prior to becoming PD at your current institution, which of the following positions did you hold? Check all that apply.**

- Residency PD at another institution
- Interim residency PD
- Associate PD
- Assistant PD
- Fellowship PD
- Faculty (non-residency leadership position)
- Clerkship (or co/assistant/associate) director
- Sub-internship director (or co-director)
- DIO (designated institutional official)
- Other (please specify): \_\_\_\_\_

**Q13. How satisfied were you with the program director hiring process?**

- Very dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Very satisfied

*Display This Question:*

*If Q13 = “Very dissatisfied” or “Somewhat dissatisfied”*

**Q14. Why were you dissatisfied with the hiring process? \_\_\_\_\_**

*Display This Question:*

*If Q13 = “Somewhat satisfied” or “Very dissatisfied”*

**Q15. Why were you satisfied with the hiring process? \_\_\_\_\_**

**Q16. If you could choose, which process would you select to hire your successor?**

- National search: external and internal candidates with job posting and interviews
- Local search: external and internal candidates within a university system, city, or region, with job posting and interviews
- *Internal only* search: within the hospital / clinics serving the training program with job posting and interviews
- No search: selection by organizational leadership (e.g., department chair, vice-chair, supervisor, DIO) *with* your input
- No search: selection by organizational leadership (e.g., department chair, vice-chair, supervisor, DIO) *without* your input
- No search: selection by you only
- Other (please explain): \_\_\_\_\_
- Unsure

*Display This Question:*

*If Q16 Does not equal “Other” and “Unsure”*

**Q17. Why would you choose that process? \_\_\_\_\_**

**Note:** Associate Program Director (APD): Faculty member(s) who are “expected to assist the program director in performance of administrative activities required to maintain the educational program.” (<https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRResidency2020.pdf>)

**Q18. How many APDs are in your program as of today?**

**Enter the number of individuals: NOT full-time equivalents. Whole numbers only. \_\_\_\_\_**

**We are exploring the hiring process for APDs. We realize that APDs might have been selected differently and for different reasons. Please answer the following brief series of questions about each of your CURRENT APDs to the best of your ability. The questions will cycle through for each APD.**

**If your program has several (e.g., eight or more) APDs, creating a list of them (offline) to reference while completing this section will simplify the process. Thank you!**

**Q19. What is the amount of full-time equivalent (FTE) support allocated to APD# X?**

- No FTE support
- >0 FTE to 0.09 FTE
- FTE to 0.19 FTE
- FTE to 0.29 FTE
- FTE to 0.39 FTE
- FTE to 0.49 FTE
- FTE or greater

**Q20. What is the gender for APD# X?**

- Female
- Male
- Non-binary
- Prefer not to answer

**Q21. Is APD# X considered underrepresented in medicine?\***

\* “...*racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.*”

- No
- Yes
- Do not know / Unsure

**Q22. Did you select APD# X for their position?**

- No: this person was in their position when I started
- Yes
- Other (please briefly explain): \_\_\_\_\_

*Display This Question:*

*If Loop current: Q22 = Yes*

**Q23. How was APD# X selected?**

- National search: external and internal candidates with job posting and interviews
- Local search: external and internal candidates within a university system, city, or region, with job posting and interviews
- *Internal only* search: within the hospital / clinics serving the training program with job posting and interviews
- *No search*: selected by organizational leadership (e.g., department chair, vice-chair, supervisor, DIO) with your input
- *No search*: selected by you
- Other (please explain): \_\_\_\_\_

*Display This Question:*

*If Loop current: Q22 = Yes And If Loop current: Q23 = “National search” or “Local search” or “Internal only search”*

**Q24. Why did you use this hiring process for APD# X? Check all that apply.**

- Standard practice for all educational leadership positions
- To acknowledge role as leadership position
- No obvious internal candidate
- No candidate asked would take position prior to its posting
- To encourage faculty to come forward
- To recruit a diverse group of candidates
- Other (please explain): \_\_\_\_\_

*Display This Question:*

*If Loop current: Q22 = Yes And If Loop current: Q23 = “No search: selected by organizational” or “No search: selected by you”*

**Q25. Why did you utilize this hiring process for APD# X? Check all that apply.**

- Standard practice for all educational leadership positions
- To increase diversity
- Lacked time for job posting and interview process
- Lacked financial resources for job posting and interview process
- Concern about disruption to current residents with leadership change
- Concern about changes for interview season and resident matching
- Individual hired had unique skillset for position
- Other (please explain):\_\_\_\_\_

**Q26. What is the gender of your department chair (or if you do not have a department chair, the gender of your supervisor as program director)?**

- Female
- Male
- Non-binary
- Unsure

**Q27. How often do you involve your other APD(s) when selecting a new APD?**

- Never
- Rarely
- Sometimes
- Often
- Always
- Have not been in position long enough to answer

**Q28. What would be your ideal process for selecting a new APD(s)?**

- National search: external and internal candidates with job posting and interviews
- Local search: external and internal candidates within a university system, city, or region, with job posting and interviews
- *Internal only* search: within the hospital / clinics serving the training program with job posting and interviews
- *No search*: selected by organizational leadership (e.g., department chair, vice-chair, supervisor, DIO) with your input
- *No search*: selected by you

*Display This Question if Q28 is NOT blank*

**Q29. Why would you choose that process? \_\_\_\_\_****Q30. Does your program have its own Diversity, Equity, and Inclusion (DEI) leader (APD or other leadership position)?**

- No
- Yes
- Unsure

*Display This Question if Q30 = No*

**Q31. Why does your program not have such a DEI leader?**

- We are planning to develop the role
- There is a department DEI person already
- We do not think that one is needed
- We do not have funding to support the role
- Other (please explain):\_\_\_\_\_

**Q32. For the following, to what extent do you believe that your institution’s selection process helps fulfill its diversity mission?**

	To no extent	To a small extent	To a moderate extent	To a great extent	To the fullest extent
Your program director hiring process	•	•	•	•	•
The associate program director hiring process	•	•	•	•	•

**B Appendix Table**

Table: Self-Reported Associate Program Director (APD) Baseline Characteristics by Residency Program Type

Program Type (AMA-FREIDA)	No.	Mean	SD	Median	IQR	Total APDs
University-based	99	4.8	2.5	5	3	477
Community-based	45	1.8	1.0	2	1	80
Community-based, University-affiliated	120	2.2	1.2	2	2	266
Military	3	3.0	1.0	3	2	9
<b>Total</b>	<b>267</b>	<b>3.1</b>	<b>2.2</b>	<b>2</b>	<b>2</b>	<b>832</b>

AMA-FREIDA= American Medical Association Residency and Fellowship Database; IQR=interquartile range; SD= Standard Deviation.