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Paternity leave provision and disparities in hematology and oncology fellowship programs across the United States

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Abstract

We aimed to analyze the availability and factors associated with paternity leave (PL) in the hematology-oncology fellowship programs across the USA. A total of 176 ACGME-accredited programs were identified using the FREIDATM Database. The data were analyzed using SPSS 26. Chi-squared analyses were used to compare the availability of PL benefits with various characteristics of the program. 27% of programs with male program directors (PDs) advertised PL compared to 16% of female-led programs. Based on the PD's race, 28% of the white PDs, 20% of the Hispanic PDs, and 17% of Asian PDs offered PL ($p<0.001$). 11% of the Northeast and 22% of the West programs offered PL, compared to Southeast (30%), Mid-West (30%), and Southwest (40%) programs. 22% of the university programs and 28% of the university-affiliated programs provided PL compared to 10% of the community-based programs. Based on the fellow's race, 36% and 16% of White and non-White fellows' predominant programs offered PL, respectively. There were no significant differences noted based on the fellow's gender, and the number in the program. There is a lack of uniformity amongst hematology-oncology fellowship programs regarding PL. A uniform PL policy would provide a balanced workload distribution and would reduce the gender gap.

Introduction

Paternity Leave (PL) is the time taken off work by a father for the care of a newborn, recently adopted or fostered child [1]. The duration and funding of PL in the United States (US) depend on employer liability and state and federal laws. The US congress passed the Family and Medical Leave Act (FMLA) in 1993, which mandates a 12-week unpaid PL to employers with 50 or more workers [2]. The US is the only high-income country where paid PL is not mandated [3]. As of April 2022, ten states have enacted laws that grant PL as a part of the state-paid family and medical leave insurance laws [4].

The Hematology-Oncology fellowship comprises 36 months, including 18 months of core clinical rotations and 18 months dedicated to research and elective rotations [5]. A fellow is required to maintain an outpatient continuity clinic throughout the training. However, the nature and duration of research and electives are institution specific [6]. Primarily, medical training overlaps with childbearing age. Therefore, becoming a par-

ent in residency or fellowship can be challenging due to many factors, including a lack of clear policies on benefits, financial concerns, peer behavior, workforce and duty hours' challenges, and a rigid timeline for progression from one stage of medical training to the following [7]. A systemic review of PL policies in graduate medical education (GME) found a lack of formal policies [8]. Over the years, this issue has been highlighted, and some societies, including the American College of Obstetricians and Gynecology, the American Board of Medical Specialists, and the fellowship council, have recommended the allowance of a six-week paid PL [9-11].

Several factors influence the uptake of PL by expectant fathers, including gender dynamics at home and work, household income, and religious and cultural beliefs. In a study by Ray et al. gender equality in PL among 21 high-earning countries was analyzed, and the US fell in the median by 9 points (with zero points for incentives and wage compensation) [12]. Similarly, a study showed significant challenges to the male residents during their surgical training at four academic institutes, including greater stigmatism and guilt related to burdening peers with clinical coverage while on leave and internal conflict between parental responsibilities and career goals [13].

Work-life balance is an important aspect considered by residents when applying for fellowship training. There is a lack of uniformity amongst hematology-oncology fellowship programs regarding PL. In this study, we analyze PL benefits among different Accreditation Council for Graduate Medical Education (ACGME) accredited hematology-oncology fellowship programs in the US to identify the association of various factors within the program structure, such as gender of the leadership and fellows, ethnicity, immigration status, and overall size of program with PL and benefits. Based on these findings, we emphasized the enactment of formal policy applicable to all hematology-oncology fellowship programs.

Methods

We used the American Medvical Association (AMA) and Fellowship and Residency Electronic Interactive Database (FREIDA) to identify 176 ACGME-accredited hematology and oncology fellowship programs. The data for this study were publicly available on each program's website and no Institutional Review Board (IRB) approval was required. Websites were utilized over electronic surveys because data were readily available to be extracted. The data were collected between March 2023 and May 2023. Each program's website was searched using a direct link from FREIDA online or manually searching the programs on Google. The data were extracted based on all possible available information on the websites of the programs. The information was assembled under major categories like program leadership, geographical distribution, type of program, (university-based/university affiliated/community), benefits, and detailed fellows' information. If available, names, pronouns, and photos were used to determine gender and race. Each major category had further subcategories, as listed in Table 1. Programs were also evaluated based on the location/state and divided into five regions based on their geographic position on the continent; Northeast (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New York, Connecticut, New Jersey, Pennsylvania, Maryland, District of Columbia), Southeast (Virginia, West Virginia, North Carolina, South Carolina, Tennessee, Georgia, Mississippi, Kentucky, Alabama, Arkansas, Louisiana, Florida), Midwest (Wisconsin, Illinois, Indiana, Iowa, Ohio, Michigan, Missouri, Kansas, North Dakota), Southwest (Arizona, New Mexico, Oklahoma, Texas), and West (California, Colorado, Utah, Washington, Oregon). The data were analyzed using SPSS version 26. Chi-squared analyses were used to compare the availability of paternity leave benefits with various characteristics of the program directors (PD), including their gender, race, graduation status (American Medical Graduate (AMG) vs. International Medical Graduate (IMG), and academic qualifications. Similarly, different traits of fellows of the hematology-oncology programs, namely their gender, graduation status (AMG vs. IMG), and ethnicity, were collated with an allowance of paternity leave benefits using Chi-squared analyses. A cutoff point of fifty percent was used to label programs with their predominant traits. The programs having more than 50% male fellows were labeled male fellows' predominant programs, while programs with more than 50% female fellows were labeled female fellows predominant. Based on ethnicity of fellows, programs were grouped as White fellows' predominant programs and non-White fellows' (African, African American, Asian, and Hispanic fellows) predominant programs. Ethnic groups were based on common cultural background or descent of the fellows. Some characteristics of programs, viz. type of program (university vs. university-affiliated vs. community-based) and the number of fellows in that program, were also taken into consideration via Chi-squared analyses while comparing with the accessibility of paternity leave in those programs. To make analysis more homogenous, only those variables were included which were mentioned in more than 50% of the programs.

Results

A total of 176 programs were included in this study. Of these, 143 programs had information about paternity leave on their websites. More than half (55%, n=93) of the program directors were male, 44% (n=75) were female, and only 0.01% (n=2) of programs had both male and female co-directors. More than a quarter (27%, n=21) of programs with male directors advertised PL compared to 16% (n=10) of programs with female directors ($p<0.005$) (Table 1) (Figure 1A).

As per the available data pertaining to the race of program directors, 61% (n=99) were white, 30% (n=49) were Asian, 5% (n=8) were African American (AA), and 4% (n=7) were Hispanic. The highest rates of PL benefits were seen in programs with White PDs (28%, n=23) in contrast to 17% (n=8), 20% (n=1), and 0% of programs with Asian, Hispanic, and AA PDs, respectively ($p<0.01$). (Figure 1B) When assessed according to the PD's graduation status, 80% (n=128) of PDs were AMG and 20% (n=31) were IMG. Amongst the AMG, 22% (n=23) allowed PL as compared to 21% (n=6) of IMG PDs ($p=0.301$).

In terms of geographical distribution, 35% (n=62) of programs were situated in Northeast, 21% (n=37) in Southeast, 23% (n=41) in Mid-West, 9% (n=16) in Southwest, and 11% (n=20) in West. There were statistically significant differences in the provision of PL among different regions, with 11% (n=6) of Northeast programs allowing PL compared to 22% (n=4) of West programs, 30% of programs in the Southeast and Midwest, and 40% of the programs in the Southwest ($p<0.01$) (Table 2).

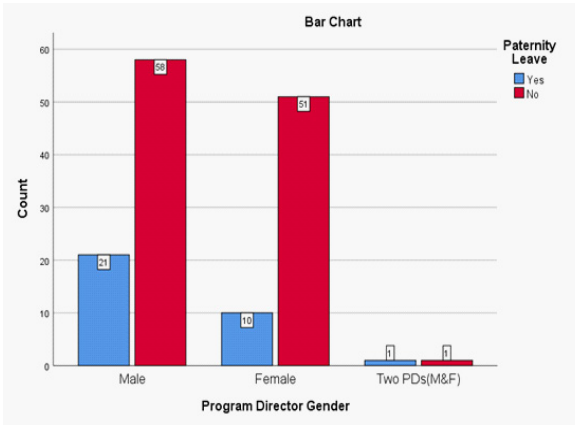
When classified based on gender of fellows, 57% (n=67) of programs were male fellow predominant, while 30% (n=35) were female fellow predominant, and 13% (n=16) had an equal distribution of male and female fellows. 29% (n=16) of male predominant programs offered PL as compared to 25% (n=7) of female fellow predominant programs and 0% of programs with equal male and female fellow's distribution but difference was not statistically significant (p=0.290) (Table 3) (Figure 2A). Based on ethnicity of fellows, 29% (n=30) of programs were White fellows predominant while 61% (n=64) were non-white fellows predominant. Only 10% (n=11) of programs had an equal distribution of ethnicity of fellows. Programs with predominantly White fellows had a significantly higher PL allowance rate 36% (n=8) compared to only 16 % (n=10) for non-White fellows' predominant programs (p=0.005).

Based on the graduation status of fellows, 66% (n=64) of programs were AMG fellows predominant, while 28% (n=27) of programs were IMG fellows predominant. Only 6% (n=6) of programs had equal AMG and IMG fellows' distribution. Among the AMG fellows predominant, AMG/IMG equal distribution programs, and IMG fellows' predominant programs 23%, 20%, and 8% provided PL, respectively (p=0.515). Out of the available data, 52% (n=80) of the programs were university programs, 35% (n=54) were university-affiliated programs, and 13% (n=20) were community-based programs. 22% (n=15) of university programs, 28% (n=13) of university-affiliated programs, and 10% (n=1) of community programs offered PL to fellows. One military hospital was also included, which did not provide any PL (p=0.010).

Nine (8%) programs had 1-5 fellows, 42 (35%) had 6-10 fellows, 34 (29%) had 11-15 fellows, 15 (13%) had 16-20 fellows, 10 (8%) had 21-25 fellows, 4 (3%) had 26-30 fellows, and remaining 5 (4%) had fellows ranging from 31-50. The PL rates in these programs were 17% (n=1), 21% (n=7), 16% (n=5), 8% (n=1), 33% (n=3), 25% (n=1), and 50% (n=2), respectively (p=0.250). (Figure 2B) When fellow gender was compared with the geographical region distribution, it showed that the Northeast had 47% (n=17) predominant male programs, 33% (n=12) female-predominated programs, and 20% (n=7) programs with equal gender distribution. In the Southeast, 68% (n=17) of programs were male predominant, 24% (n=6) were female predominant, and 8% (n=2) had equal distribution. In the Midwest, 64% (n=18) of programs had male predominance, 21% (n=6) had female predominance, and 15% (n=4) had equal distribution. Programs in the Southwest had 54% (n=7) with a majority of male fellows, 38% (n=5) with a majority of female fellows, and 8% (n=1) with equal distribution. In the West, 50% (n=8) of programs had male-predominant programs, 38% (n=6) had female-predominant programs, and 12% (n=2) had equal gender distribution, (p=0.742).

Discussion

The selection of fellowship specialty after residency is multifaceted. Work-life balance and the ability to devote time to the family will play an essential role in career choice for both male and female medical resident physicians [14]. Medical training often overlaps with childbearing years; however, gender disparity and lack of clarity regarding PL have become a source of frustration for physicians in training [15]. One study based on paternity, maternity, and adoption leaves in orthopedic programs across the US reported that only 42% of programs had a formal PL policy [14]. Although PL and reducing drivers of burnout have received growing interest, the challenges surrounding



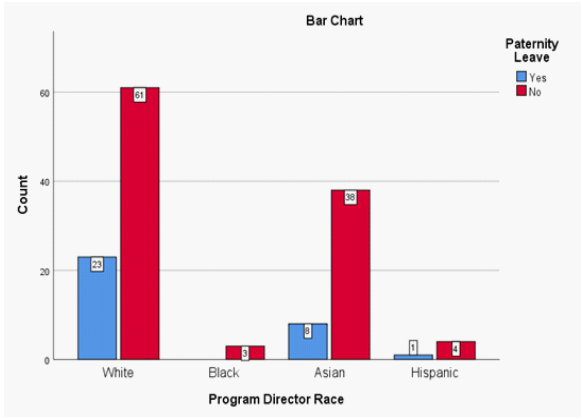
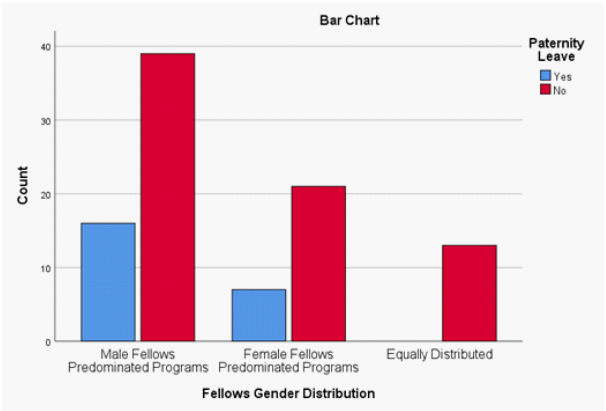


Figure 1: Paternal leave availability based on characteristics of program directors.
1A) Gender.
1B) Race.



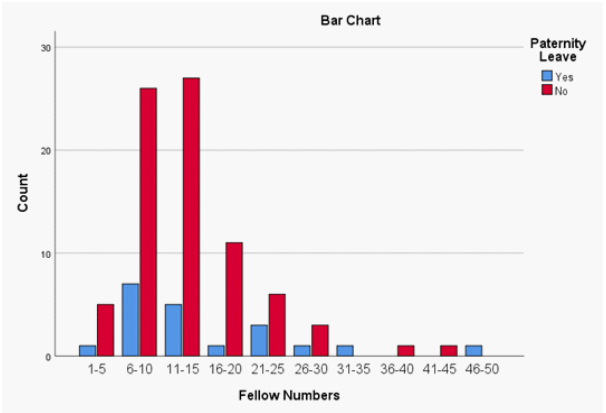


Figure 2: Parental leave availability based on characteristics of fellows.
2A) Gender.
2B) Number.

Table 1: Paternity leave availability based on characteristics of the program director (PD).

		Paternity Leave		
	Yes (n=32)	No (n=111)	NA (n=33)	total
Gender of program director (p<0.01)				
Male	21	58	14	93
Female	10	51	14	75
Two department heads (Male and Female)	1	1	0	2
Not available	0	1	5	6
Total	32	111	33	176
Race of the program director(p<0.01)				
White	23	60	16	99
AA	0	3	5	8
Asian	8	38	3	49
Hispanic	1	4	2	7
Two PDs (1 White and 1 AA)	0	1	0	1
NA	0	5	7	12
Total	32	111	33	176
Medical school of the program director(p<0.01)				
AMG	23	81	24	128
IMG	6	22	3	31
Not available	3	8	6	17
Total	32	111	33	176

AA: African american; AMG: American medical graduate; IMG: International medical graduate; NA: Not available.

Table 2: Paternal leave availability based on geographical local of the program (p=0.035).

	Paternity Leave			
	Yes (n=32)	No (n=111)	NA (n=33)	Total
Region of the program				
Northeast	6	47	9	62
Southeast	9	21	7	37
Midwest	11	28	4	41
Southeast	2	3	11	16
West	4	14	2	20
Total	32	111	33	176

NA: Not available.

Table 3: Paternal leave availability based on characteristics of the fellows.

	Paternity Leave			
	Yes	No	NA	Total
Program based on fellow gender (p=0.290)				
Male predominant	16	39	12	67
Female predominant	7	21	7	35
Equally distributed	0	13	3	16
Total	23	73	22	118
Program based on fellow race (p<0.01)				
White predominant	8	14	8	30
Non-White predominant	10	51	3	64
Equal distribution	4	5	2	11
Total	22	70	13	105
Program based on fellow graduation status (p=0.515)				
AMG predominant	12	40	12	64
IMG predominant	2	22	3	27
Equal distribution	1	4	1	6
Total	15	66	16	97
Program based on fellow number (p=0.250)				
1-5	1	5	3	9

6-10	7	26	9	42
11-15	5	27	2	34
16-20	1	11	3	15
21-25	3	6	1	10
26-30	1	3	0	4
31-50	2	2	1	5
Total	20	80	19	119

AMG: American medical graduate; IMG: International Medical Graduate; NA: Not available.

PL in training have received little attention. In this study, we highlighted the association of possible different factors in hematology-oncology fellowship programs across the US and the availability of PL for fellows.

This study shows a direct correlation between the male gender of PDs and the availability of PL. This contrasts with a study conducted by Hui et al. in 2021 on the gender of department chairs and paid PL in academic radiology residency programs, where 69% of programs chaired by females advertised paid parental benefits, compared to 38% chaired by males. Yet, overall, females held fewer academic leadership positions than their male counterparts in that study [16]. Our study also showed that the programs with White-predominant leadership offered more PL compared to other races ($p<0.01$). This is likely due to Western culture's greater emphasis on work-life balance. Our analysis demonstrates that a male predominance was seen in areas with a higher percentage (>30%) of PL allowance which contrasts with a study of gastroenterology fellowship programs which showed a direct correlation between the availability of PL and the number of female fellows [17,18]. This observed difference could be because most studies reported maternity and paternity leave under the heading of parental leave, whereas our study specifically looked for paternity leave and more studies are needed for comparison on similar variables.

Paternity leave has well-known benefits, including providing lasting benefits for father-child bonding and communication, reducing domestic stress, and improving maternal mental health and postpartum recovery. However, unlike expectant female trainees who require time to recover from childbirth, leave for new fathers is not validated by a visible physical need but rather requires insight into the less tangible importance of parental involvement in childbearing [19]. The perception that men face fewer challenges returning to work after having a child than female trainees may result in less initiative to enact uniform PL policies. This is evident as, unlike recent increase in program-level maternity leave policies, little progress has occurred in PL policies, as shown by a study in surgical residency programs that documented a 50% increase in formal maternity leave policies from 2016 to 2019, compared to no change in the same period [20,21].

On a positive note, the American Board of Medical Specialties (ABMS) now requires all member boards to have a written policy clearly stating the training required for board certification, which must include maternity and paternity, caregiver, and medical leave in addition to vacation time [11]. Additionally, ABMS, in July 2020, announced the adoption of a parental leave policy for residents and fellows starting from July 2021, by which a minimum of six weeks of leave would apply to all new parents, including birthing, adoptive/foster, and surrogate parents [22]. Vacation and/or sick leave can be used in the creation of six weeks of parental leave, given that these six weeks do not fully deplete or exceed the duration of provided vacation and/or sick leave. This could subconsciously force individuals against taking sick leave to save the number of days for parental leave when diseased, which is especially detrimental considering the recent pandemic. Other limitations to the policy include the availability of parental leave only once during training, applicability only to programs of more than two years, and the fact that the policy cannot supersede individual program policies [22]. Therefore, it does not apply to fellowship programs such as bone marrow transplantation of a one-year duration. However, it does add uniformity compared to before, as prior policies have frequently excluded parents in a same-sex relationship, adoptive parents, and non-birthing partners [23].

Our study highlights the lack of uniformity among hematology-oncology fellowship training programs concerning PL as reported by previous studies in different specialties [24,25]. This variability in availability and duration of parental leave can cause residents to feel pressured into either delaying childbearing or taking a shorter break to prevent professional stigma or prolonging training [16,26]. In a study at the University of Washington, 81% of married or partnered residents intentionally delayed childbearing, but only 32% reported satisfaction with this decision [27]. While paid parental leave is associated with definite health benefits, including improved rates of breastfeeding, neonatal immunizations, child morbidity, and mortality, as well as better stress management, enhanced personal wellness and mental health, and quality of life as compared to unpaid leave, it is also essential to emphasize on the benefits that specifically PL will provide by allowing male physicians to spend greater quality time with their offspring [28,29]. It is reasonable to conclude that a lack of uniform policy leads to childbearing decisions without explicit knowledge or foresight of the hardships associated with parenthood, resulting in negative impacts and outcomes on father-child bonding and the care of the newborn.

To the best of our knowledge this is the first study of its kind in hematology-oncology and has some limitations. As public websites of the fellowship programs and FRIEDA were used to obtain pertinent data, there is a potential for discrepancy if the websites have not been updated. Moreover, data were collected over three months (March 2023-May 2023), and changes to website information may have been made after data collection were completed. Additionally, our analysis is limited by determining gender and race, of the PDs and fellows, primarily through photos, names, and the use of preferred pronouns on the websites where available. We have also chosen to maintain gender as a binary distinction rather than a spectrum of choice. Thus, we recognize that these assumptions may misrepresent the actual gender and race ratio. The differences within regional stratification can be attributed to small sample sizes and more extensive programs' ability to accommodate such leaves as they have more fellows available to pick up the gap in duty hours left behind by physicians availing PL. Another limitation is the institutional GME policy, the ACGME policy, and the state employ-

ment policies that may clash with or supplant the choice of the PD, in which case gender distinction becomes inconsequential as a direct causative influence upon PL. Further studies should utilize surveys as part of data collection and directly compare institutional policies and departmental policies to improve the accuracy of results and remove potential confounders.

Conclusion

Our study calls attention to the shortcomings in the provision of paternity leave faced by the fellows of hematology-oncology programs. Unstandardized policies lead to work overload and gender bias. Therefore, programs must formulate a uniform policy regarding paternity leave. Having an equable approach will improve the fellows' well-being and refine patient care in the long run.

Declarations

Data availability statement: The original contributions presented in the study are included in the article/supplementary material; further inquiries can be directed to the corresponding author.

Authorship: All authors contributed to the manuscript and fulfilled criteria per the uniform requirements set forth by the International Committee of Medical Journal Editors (ICJME) guidelines. All authors have reviewed and approved the final version of the manuscript.

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