



Introduction

- Pain medicine has exhibited deepening **disparities** in gender and race among **fellows**.
- Inequity has persisted since at least 2019, with the percentage of **female applicants** ranging from 19.6–25.1% and **declining** [1].
- Most fellows identify as **White or Asian**
- Amid increasing patient diversity and a decline in fellowship applications, this signals a crisis for the future of pain medicine.

Materials and Methods

- Data were collected from de-identified reports from Association of American Medical Colleges (**AAMC**) and National Resident Matching Program (**NRMP**) websites [2,3].
- Data from **2019–2024** from AAMC and **2023–2025** from NRMP were analyzed, as these were the years publicly available.
- Match data from NRMP were limited to the publicly available **anesthesiology** applicants.
- Demographic variables included gender, race/ethnicity, and first-generation college or medical school graduate status.
- As the report contains no identifiable information, it is exempt from IRB review as per UC Davis policy.

Results

AAMC Data

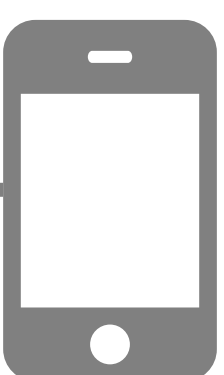
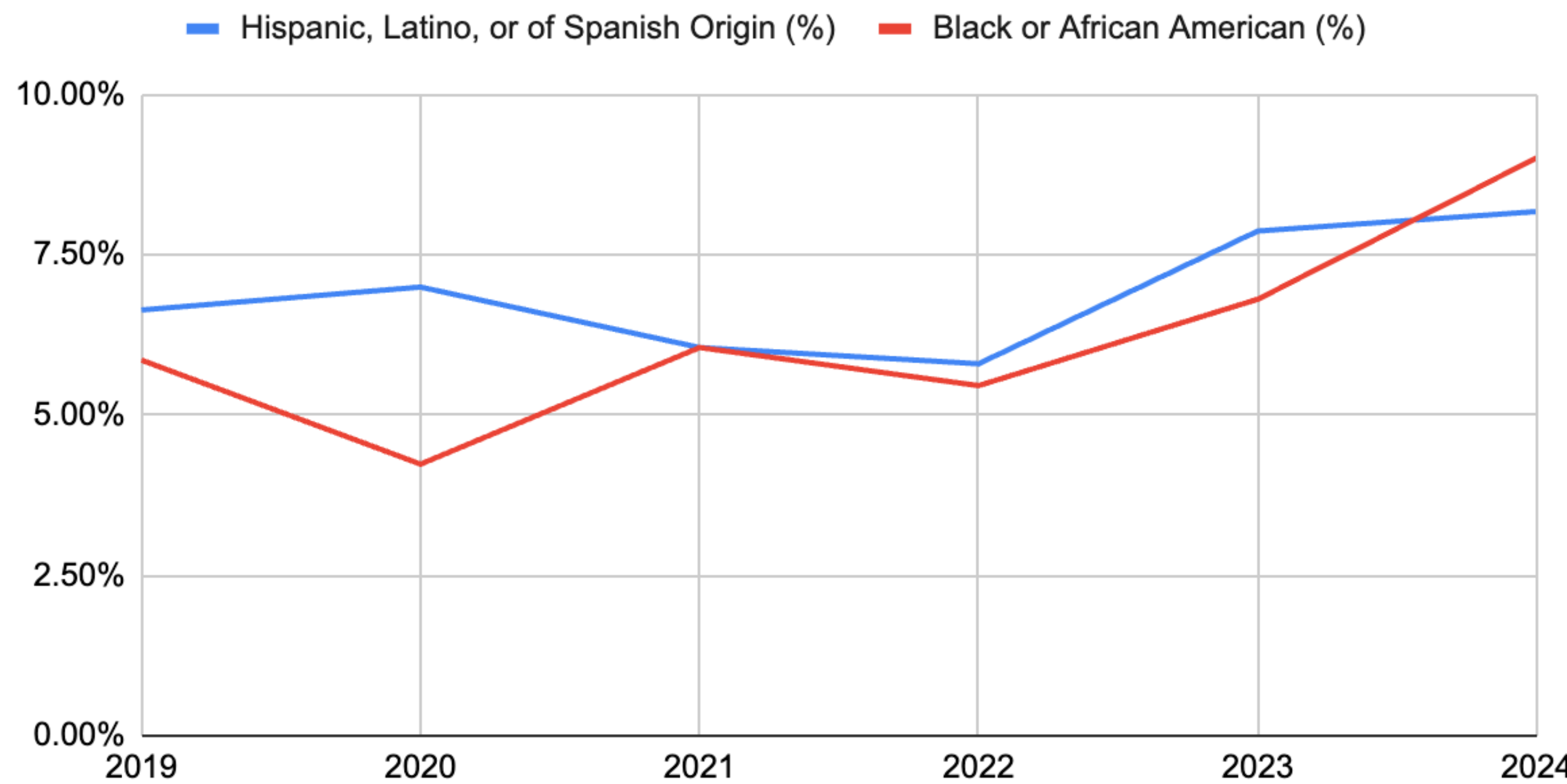
- The percentage of **female applicants** remained low from 2020–2023, from 19.6% to 22.4%, before increasing to a **five-year high** of 24.9% in 2024 (Table 2).
- The percentage of **African-American applicants** reached a five-year **high** in 2024, rising from 4.2% to 9.0% (Figure 1).
- Similarly, **Hispanic applicants increased** from 6.6% to 8.2% in the same year (Figure 1).
- The percentage of applicants who identify as White declined from 42.8% in 2019 to 38.4% in 2024 (Table 1).

NRMP Match Data

- The percentage of **matched female anesthesiology applicants rose** from 21.8% in 2023 to 27.1% in 2025 (Table 3, Figure 2).
- The percentage of matched applicants identifying as White remained steady at 46.4% to 46.6%.
- The number of applicants who identified as **first-generation medical school graduates increased** 65.9% to 72.5% (Table 3).

Recent AAMC and NRMP data show modest gains in female, Black, Hispanic, and first-generation pain medicine applicants and matched fellows, but overall diversity remains limited.

Figure 1. Percentage of Pain Medicine Applicants Identifying as Hispanic or Black



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Table 1. Self-identified race/ethnicity of pain medicine applicants between 2019-2024 (source AAMC).

Match Year	2019	2020	2021	2022	2023	2024
Race/Ethnicity (N)						
American Indian or Alaska Native	2 (0.4%)	1 (0.2%)	4 (0.7%)	2 (0.3%)	2 (0.4%)	3 (0.6%)
Asian	159 (31.1%)	151 (27.8%)	156 (27.0%)	168 (28.7%)	157 (33.4%)	132 (27.7%)
Black or African American	30 (5.9%)	23 (4.2%)	35 (6.1%)	32 (5.5%)	32 (6.8%)	43 (9.0%)
Hispanic, Latino, or of Spanish Origin	34 (6.6%)	38 (7.0%)	35 (6.1%)	34 (5.8%)	37 (7.9%)	39 (8.2%)
Native Hawaiian or Other Pacific Islander	0 (0%)	1 (0.2%)	1 (0.2%)	4 (0.7%)	0 (0%)	3 (0.6%)
White	219 (42.8%)	237 (43.6%)	243 (42.0%)	248 (42.3%)	177 (37.7%)	183 (38.4%)
Other Race/Ethnicity	20 (3.9%)	21 (3.9%)	30 (5.2%)	24 (4.1%)	27 (5.7%)	29 (6.1%)
Unknown Race/Ethnicity	48 (9.4%)	34 (6.3%)	42 (7.3%)	37 (6.3%)	12 (2.6%)	18 (3.8%)

Table 3. Self-identified race/ethnicity, gender, and first-generation status of matched anesthesiology applicants between 2023-2025 (source: NRMP).

Match Year		2023	2024	2025
Race/Ethnicity	Asian	92 (35.2%)	85 (37.0%)	80 (32.4%)
	White	121 (46.4%)	101 (43.9%)	115 (46.6%)
	Black/African American	0	0	26 (10.5%)
	Hispanic/Latino	0	0	27 (10.9%)
Gender	Men	204 (78.2%)	182 (79.1%)	180 (72.9%)
	Women	57 (21.8%)	48 (20.9%)	67 (27.1%)
First Generation	College Graduate	42 (16.1%)	44 (19.1%)	41 (16.6%)
	Medical School Graduate	172 (65.9%)	169 (73.5%)	179 (72.5%)
Total Number of Matched Applicants		261	230	247

Figure 2. Percentage of Matched Anesthesiology Applicants Identifying as Female

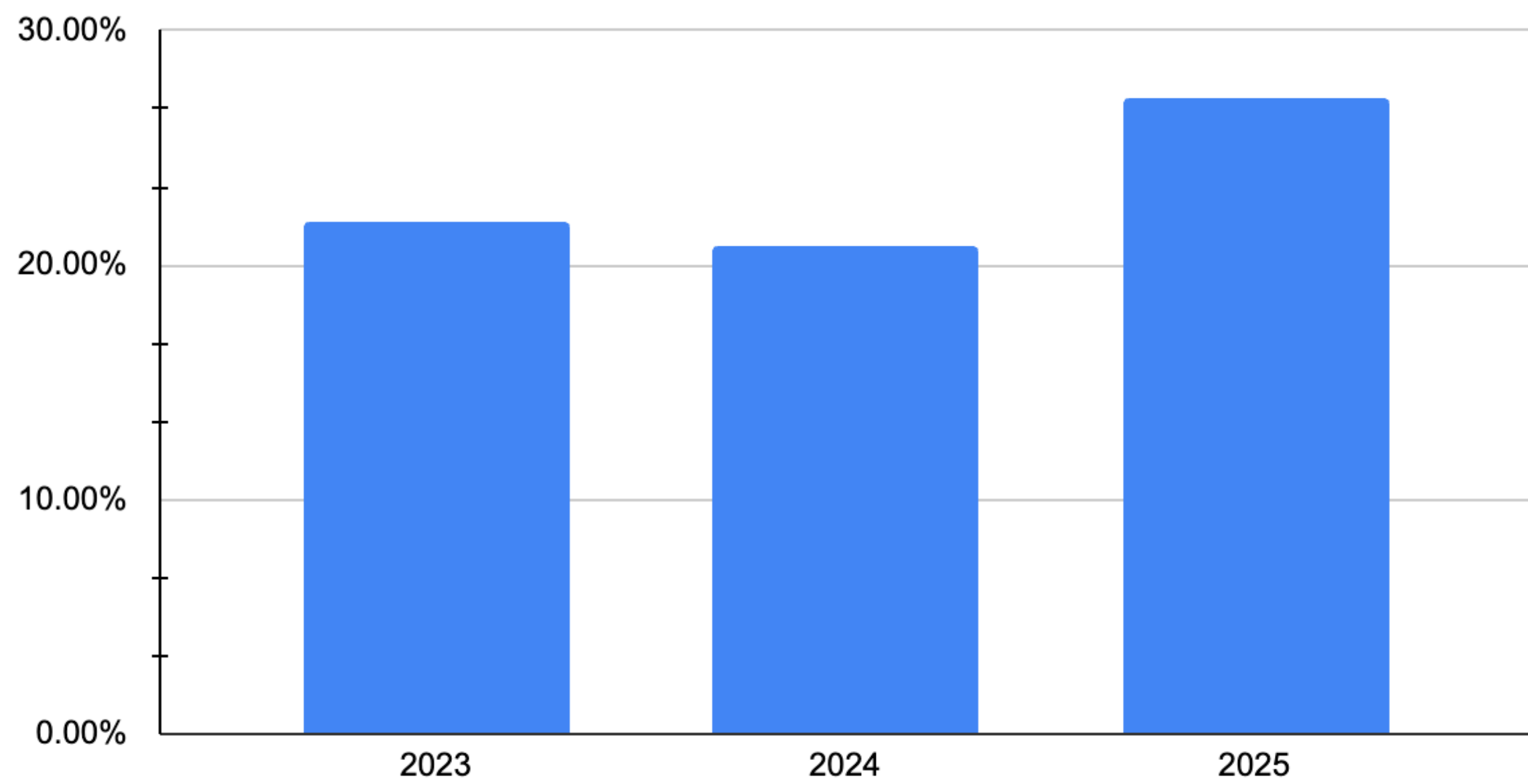


Table 2. Self-identified gender of pain medicine applicants between 2019-2024 (source AAMC).

Match Year		2019	2020	2021	2022	2023	2024
Gender	Male	389 (74.8%)	413 (80.4%)	418 (77.6%)	430 (78.5%)	351 (78.7%)	319 (75.1%)
	Female	131 (25.2%)	101 (19.6%)	121 (22.4%)	118 (21.5%)	95 (21.3%)	106 (24.9%)
Total Number of Applicants		520	514	540	548	446	425

Discussion

- There is a promising **increase in diversity**, particularly female, Black, and Hispanic applicants, with a rise in matched female fellows. More **first-generation medical school graduates** matched.
- However, most **matched fellows** identify as **White** despite fewer White applicants.
- NRMP data are limited to anesthesiology; notably, 2023–2024 report no Black or Hispanic applicants, raising concerns about incomplete data.
- While 2024 offers hope, **persistent disparities** require research to identify barriers, drivers of improvement, and recruitment impact.

References

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