

Has Pain Medicine Fallen Behind? Trends in Female Applicants Compared With Other Interventional Specialties

Aagna Patel, DO[1], Nicole Hatchard, DO[2], Chinar Sanghvi MD[2], Naileshni Singh, MD[2], Scott Pritzlaff, MD[2], Vandana Sharma, MD[3], Jennifer Lee, MD[4], Lee Nguyen, MD[5]

[1] Larkin Community Hospital, South Miami, [2] University of California, Davis School of Medicine, [3] SUNY Upstate Medical University, [4] University of Washington, [5] Sutter Health System, Elk Grove

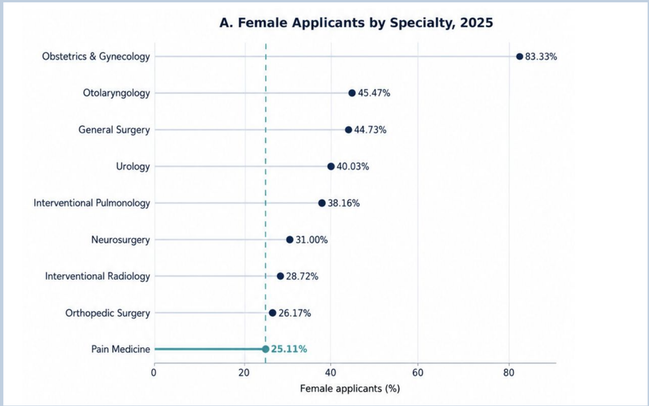
INTRODUCTION

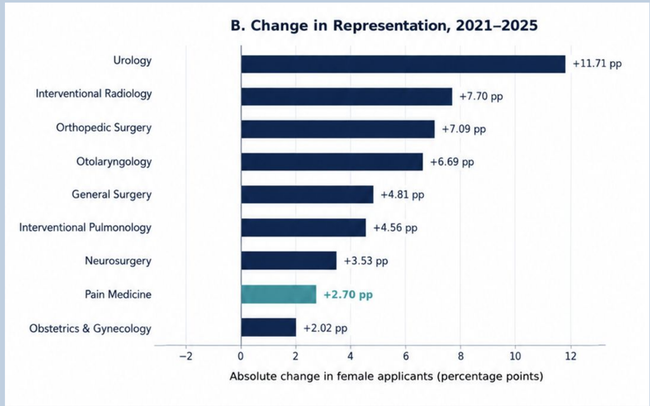
- Female representation has increased across several interventional specialties, yet women comprised only **21.3% of pain medicine trainees** in 2023–2024.
- From 2019-2023, the number of female pain medicine applicants fell **27.5% (131 to 95)**, compared with a **9.8% decline** among male applicants.
- It remains unclear whether the gap emerges **before application** (preference for the specialty) or through differential progression in the Match (attrition from registration and match participation).
- Comparing specialty application trends with active and matched applicant representation may help identify where the gap emerges and guide targeted interventions.

METHODS

- **Design and sources:** Retrospective analysis of aggregate AAMC specialty applicant data (2021–2025) and NRMP Match data (2022–2026)
- **Comparisons:** Nine specialties—pain medicine, orthopedic surgery, interventional radiology, neurosurgery, interventional pulmonology, urology, general surgery, otolaryngology, and OB/GYN
- **AAMC outcomes:** Female share of all applicants in 2025 and change in that share from 2021-2025, reported in percentage points (pp). The denominator included male applicants and applicants with unknown gender.
- **NRMP outcome:** Female share of active versus matched pain medicine applicants in each 2023–2026 Match cycle. “Active” denotes applicants who certified a rank order list and entered the Match. Annual aggregate cohorts do not establish individual match rates or attrition.

RESULTS





Across nine interventional specialties, **pain medicine had the:**

- **Lowest female representation:** 25.11% in 2025, ranking last among nine specialties.
- **Slow comparative growth:** +2.70 percentage points (pp) from 2021–2025; seven of eight specialties gained more.
- **Limited Match-pool growth:** +1.20 pp from 2023–2026, trailing five of six comparators with available data.
- **Similar active and matched representation:** Matched-minus-active differences ranged from −0.70 to +0.60 pp across four cycles, suggesting the gap emerges before the Match.

DISCUSSION

- Pain medicine’s applicant pool showed **low female representation and limited growth** relative to most comparator specialties.
- Across four Match cycles, the female share of **matched** pain medicine applicants closely mirrored the female share of **active** applicants. This pattern points to a limited applicant pipeline as a likely contributor to underrepresentation, though aggregate data cannot rule out differences in individual match outcomes.
- Efforts should begin **before fellowship application**: expand early exposure to pain medicine, connect trainees with mentors and sponsors, and make women in the specialty more visible with both local and national efforts..
- Individual-level research is needed to identify barriers to applying and determine whether match outcomes differ by gender.

REFERENCES

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