

Trends in Gender and Racial Diversity Among Surgical Subspecialties

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10

Years of Data

9

Surgical Subspecialties

162K+

Residents (2023–24)

ACGME

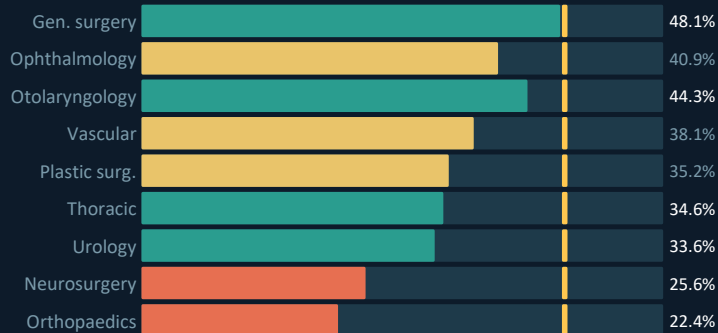
Data Source

BACKGROUND & METHODS

Retrospective cohort analysis using ACGME Data Resource Book (AY 2013–14 to 2023–24). Gender and racial distributions analyzed via Mann-Kendall test for significance and Theil-Sen regression to project time to parity. URM defined per AAMC as Hispanic/Latino, Black/African American, and American Indian/Alaskan Native. Benchmarks: 48.6% female (all residents), 50.5% (US population); 16.7% URM (residents), 33.2% (US population).

FEMALE REPRESENTATION 2023–24

% female residents · dashed line = 48.6% parity benchmark

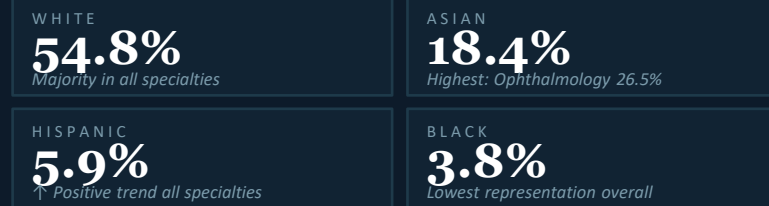


■ Sig. gain ■ No sig. change ■ Lowest repr. ■ 48.6% parity

NOTABLE HIGHLIGHTS

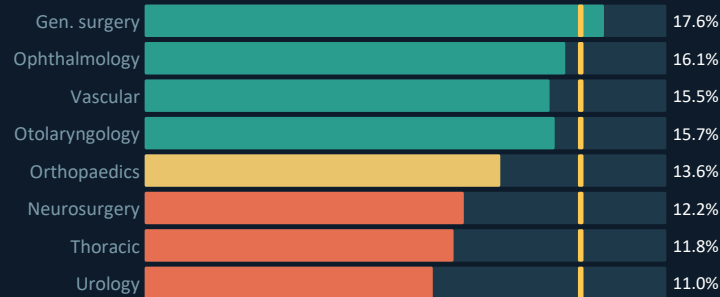
- 01** Colorectal surgery (53.6%) is the only surgical specialty exceeding the all-resident female rate of 48.6% — surpassing parity.
- 02** Orthopaedic surgery reduced its time-to-parity estimate from 117–138 years to just ~43 years, reflecting recent accelerated gains.
- 03** 6 of 9 specialties showed statistically significant positive trends for female representation (Kendall's tau > 0.85).
- 04** Ophthalmology is the only specialty with a negative gender trend (-2.4%), despite having the highest proportion of Asian residents (26.5%).

RACIAL COMPOSITION — 10-YEAR AVERAGE



URM REPRESENTATION 2023–24

% URM residents · dashed = 16.7% resident parity benchmark



All specialties remain far below US population URM benchmark of 33.2%

RACE DISTRIBUTION BY SPECIALTY (AVG %)

Specialty	White	Asian	Hispanic	Black
Gen. surgery	50.9	15.0	7.3	5.0
Orthopaedics	64.1	10.7	4.7	3.8
Neurological	52.0	18.4	6.0	4.7
Ophthalmology	50.1	26.5	5.0	2.7
Otolaryngology	56.7	18.1	4.8	2.7
Plastic surg.	55.1	17.3	8.4	4.9
Vascular	50.5	21.0	5.8	4.6
Thoracic	56.2	20.6	5.4	2.2
Urology	57.7	18.1	5.6	3.8

KEY FINDINGS

Gender Representation

Female representation improved significantly in 6 of 9 specialties. Colorectal surgery (53.6%) is the only specialty exceeding the all-resident female rate. Orthopaedics (22.4%) and neurosurgery (25.6%) lag furthest behind. Ophthalmology uniquely showed a negative trend (-2.4%).

Race / Ethnicity

URM representation increased across all specialties, with statistically significant gains in 8 of 9. Orthopaedics had the highest proportion of White residents (64.1%) and lowest Asian (10.7%). All specialties remain far below the US population URM benchmark of 33.2%.

Female URM

URM female representation rose across all specialties. General surgery now exceeds the all-resident female URM rate (17.6% vs. 16.7%). Plastic surgery has the furthest projected path to URM parity (~49 years to US population benchmark).

PROJECTED YEARS TO GENDER PARITY



CONCLUSION

Progress has been made reducing gender and racial disparities in surgical subspecialties, but significant gaps remain. Orthopaedic and neurological surgery are the most persistently male-dominated fields. Black and Hispanic residents remain far below national demographics. Structural interventions—pipeline programs, mentorship, equitable promotion, and implicit bias training—are urgently needed.