

# Trends in Leadership within Orthopaedic Foot and Ankle Fellowships

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## Background

No study in the orthopaedic literature has analyzed the demographic characteristics or surgical training of foot and ankle fellowship directors (FDs). Objective determinations for leadership positions within orthopaedic surgery remain inconclusive. Our group sought to illustrate demographic trends among foot and ankle fellowship leaders.

## Methods

The American Orthopaedic Foot and Ankle Society (AOFAS) Fellowship Directory for the 2021 to 2022 program year was queried in order to identify all foot and ankle fellowship leaders at programs currently offering positions in the United States and Canada. For all fellowship leaders, data points gathered included age, sex, race/ethnicity, medical school/residency/fellowship location of training, time from training completion until FD appointment, length in FD role, and individual research H-index.

Table 1. Roles and Demographics of FLs

Overall Leadership	N (%)
Total fellowship program leaders	68 (100.00%)
Fellowship directors	49 (72.06%)
Co-fellowship directors	19 (27.94%)
Demographics	N (%)
Male	65 (95.56%) (OR*:1.02 [0.73-1.44])
Female	3 (4.41%) (OR*: 0.66 [0.21-2.1])
Mean age	51.45
Mean Scopus h-index	15.28
Ethnicity:	
White	60 (88.24%) (OR*: 1.04 [0.72-1.44])
Asian	5 (7.35%) (OR*: 1.10 [0.44-2.73])
African American	1 (1.47%) (OR*: 0.77 [0.11-5.62])
Hispanic/Latino	1 (1.47%) (OR*: 0.67 [0.09-4.85])
Other	1 (1.47%)

\*OR indicates odds ratio calculated using collected FL demographics compared to the American Academy of Orthopaedic Surgeons (AAOS) 2019 Orthopaedic Practice in the United States (OPUS) survey demographics

Table 2. Education, Employment, and Leadership Progression

Degrees and Fellowship Training Obtained	N (%)
FLs with additional degrees*	7 (10.29%)
FLs with a MD degree	65 (95.56%)
FLs with a DO degree	3 (4.41%)
FLs with a MS degree	3 (4.41%)
FLs with a MPH degree	2 (2.94%)
FLs with a PhD degree	1 (1.47%)
FLs with a MBA degree	1 (1.47%)
FLs with additional fellowship training**	9 (13.24%)
FLs who completed trauma fellowship training	5 (7.35%)
FLs who completed sports medicine fellowship training	3 (4.41%)
FLs who completed adult reconstruction fellowship training	1 (1.47%)
Education and Employment Progression:	
Mean calendar year of medical school graduation	1995
Mean calendar year of residency graduation	2001
Mean calendar year of fellowship graduation	2002
Mean duration from fellowship graduation to earning the position of FL	11.23
Mean duration of FL employment at his/her current institution	13.58
Mean duration that the FL has held his/her position as FL	7.71
Mean time from year of hire by current institution to year promoted to FL	5.78
Institutional Loyalty	N (%)
FLs currently working at the same institution that he/she completed residency training	13 (19.12%)
FLs currently working at the same institution that he/she completed fellowship training	8 (11.76%)
FLs currently working at the same location at which he/she completed both residency and fellowship training	2 (2.94%)
Major Foot and Ankle Society and Research Leadership	
FLs who have served as president of AOFAS	n = 7 (10.29%)
FLs who currently hold an editorial board role in a major foot and ankle journal***	n = 11 (16.18%)
Years as FL vs. Scopus h-index	r = 0.272
Age vs. Scopus h-index	r = 0.595

\* Degrees in addition to undergraduate (BA/BS) and medical degrees (MD/DO)  
\*\* Any fellowship training in addition to foot and ankle fellowship training  
\*\*\* Major foot and ankle journals included were FAI, JOT, JAAOS, and Foot and Ankle Clinics  
FL indicates fellowship leader

## Results

We identified 68 fellowship leaders, which consisted of 48 FDs and 19 co-FDs. 65 individuals (95.6%) were male and three (4.4%) were female. 88.2% of the leadership was Caucasian (n = 60), 7.4% was Asian American (n = 5), 1.5% was Hispanic/Latino (n = 1), and 1.5% was African American (n = 1). The average age was 51.5 years, and the calculated mean Scopus H-index was 15.28. The mean duration from fellowship training graduation to acquisition of a fellowship leader position was 11.23 years. Among current FDs, the most attended residency program was Harvard (n=5) and the most attended fellowship program was Mercy Medical Center (n=6).

## Limitations

A central limitation involved acquiring CVs for usage in our data analysis, which may be outdated and/or inaccurate. Furthermore, much of this online data is self-reported. Program directors were contacted directly to fill in any data that could not be gathered from online resources. Another limitation exists within gender and ethnicity and/or race as these are self-identified traits. Program administrators and/or directors were contacted to obtain information regarding age, gender, and ethnicity. For any information regarding gender or ethnicity that could not be gathered directly, the authors used all available resources to make a strong educated conclusion. Lastly, our study represents the current state of foot and ankle FLs but given the dynamic nature of trends in academic leadership, these results may be slightly variant overtime. Our results did not seek to analyze subjective factors for the hiring of FLs as this study focused on objective determinants of academic leadership.

## Conclusions

Leaders within foot and ankle orthopaedic surgery are characterized by research productivity and experience, but more demographic diversity is needed as women and minority groups are largely underrepresented among leadership positions in the field of orthopaedic foot and ankle surgery.