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Introduction and Purpose

By standardizing and assessing patient-centered and outcome-focused competencies during residency, the Accreditation Council for Graduate Medical Education (ACGME) oversees the transition from student to practicing physician. In the podiatric medicine and surgery residency, similar competencies are outlined by the Council for Podiatric Medical Education (CPME). Specifically through document 320. CPME 320 outlines the essential elements of sponsorship, administration, program development, clinical expectations, and assessments that are necessary for initial and continued approval (1). One specific program standard entails the resident to “be professionally inactive, life-long learners and teachers utilizing research, scholarly activity, and information technologies to enhance professional knowledge and clinical practice.” (Program standard 6.10) (1).

Though both directors and residents previously cited podiatric original research as an area of weakness during the podiatric medicine and surgery training experience, incorporation of a period of required research into residency programs has been suggested (2). With an emphasis on scholarly activity over the past several years in medical and surgical residencies, there has been an increase in resident participation in research and ultimately resident authored publications across many specialties (3-5).

To our knowledge, there has been no formal investigation and analysis of research conducted by residents in the field of foot and ankle surgery. With the increase in residencies, residents, and years required for completion of training, it is thought that more resident-authored research would be published. The purpose of this study is to describe the contribution of podiatric medicine and surgery resident research in The Journal of Foot and Ankle Surgery (JFAS) the official publication of the American College of Foot and Ankle Surgeons (ACFAS). The primary goal of this systematic review was to identify the geographic distribution and trends of different types of research published by podiatric medicine and surgery residents over a ten-year period. Secondary goals of this study were to compare recent resident publication trends with those trends prior to the mandatory three-year residency.

Methods

The Journal of Foot and Ankle Surgery 2009-2018

2,101 Articles screened

272 articles excluded (including order non-relevant, non-relevant research, review articles and letter items)

1,829 full texts assessed for eligibility

1,826 Studies included in quantitative analysis

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Results

Table 1: Distribution of resident-authored and resident-first authored publications, 2009-2018.

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Discussion

Evidence-based medicine remains imperative to the advancement of podiatric medicine and surgery as displayed by the growing body of research over the past decades (6-8). The results of this study show that research activity in podiatric residency has been gaining traction over the years. These results could be due to an increase in the amount of time residents have to complete projects after July 2011, one of three identified barriers to participation in research along with difficulties with co-authors and research being a low-priority area (9).

An increase in scholarly activity could also be due to the evolving curriculum of residency programs (10). Studies revealed that programs with the highest levels of participation made research activity a requirement, were led by a program director that highly valued academic participation, and maintained a significant percentage of faculty available for mentorship (9). Currently, residents include the lack of time dedicated to research, availability of mentors, absence of research curricula, shortage of funding, and lack of perceived value as barriers to research participation (11-12). Recent studies analyzing foot and ankle surgery residents share this sentiment, showing that activities of lesser value (waited time spent waiting for patients to be brought back to the operating room, test results, or any other unexpected weekday delays) take away from more valuable opportunities such as education, research, operating room, and patient care (13). As CPME conducts periodic reviews and revisions of its standards, requirements, and procedures, future guidelines could promote curriculums that encourage resident academic goals while maintaining their clinical training. Though such time may take residents away from clinical duties, studies show these opportunities increase resident satisfaction during training (15).

In conclusion, we found that resident participation in research through the number of authors as well as number of resident-authored publications has increased over the past decade. Though the number of residents has not increased in proportion to all authors, the number of resident-first authorships has undergone a proportional increase to all resident authored papers. These findings illustrate that residents have increased their role in scientific inquiry regarding foot and ankle surgery. The results of this investigation could be used to evaluate the current state of foot and ankle surgery residency programs and develop or improve a residency program’s research curriculum.

References

1. Council on Podiatric Medical Education. Residencies and Requirements for Approval of Podiatric Medicine and Surgery Residencies. Available at: https://www.acfasm.org/Publications/Requirements/Residency-Requirements.PDF