

Analysis of Demographic and Industry Payments Among Orthopaedic Fellowship Program Directors in the United States: Implications for Training and Physician-Industry

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INTRODUCTION: Orthopaedic fellowship directors play a crucial role in shaping patient care approaches of fellowship trainees under their guidance. Given the influence fellowship directors have over surgeons-in-training practices, their financial conflicts of interest are of notable significance.

METHODS: A list of 566 orthopaedic fellowship program directors in the United States was created. Program directors from the following subspecialties were included: adult hip and knee (n=116), sports medicine (n=91), hand (n=85), spine (n=68), trauma (n=64), foot and ankle (n=49), pediatric orthopaedics (n=41), shoulder and elbow (n=34), and musculoskeletal oncology (n=18). Demographic information of the directors was obtained from public physician profiles. General payments, research payments, associated research funding, and ownership interest data were collected using Open Payments, a public disclosure database. Descriptive statistics and Student's t-tests were employed in the investigation.

RESULTS: The 566 directors collected 57,610,923.47 USD in general payments in 2021 with a median of 7,180.56 USD. Fellowship directors who specialize in shoulder and elbow earned significantly greater than sports medicine (75,580.42 v. 8,006.10, p=0.031), hand (1,200.00, p=0.012), spine (22,296.72, p=0.048), trauma (6,104.73, p=0.046), foot and ankle (38,584.57, p=0.046), pediatric orthopaedics (1,480.46, p=0.016), and musculoskeletal oncology (348.09, p=0.011) directors. There was no significant difference between shoulder and elbow specialists and hip and knee specialists (75,580.42 v. 16,919.76, p=0.30). The top 5% of earners (n=28/566) accounted for 61.5% of the total value. Royalties accounted for 74.6% (43,004,029.50 USD) of the total value exchanged, followed by consulting at 13.7% (7,894,319.64 USD). Stryker Corporation represented the most common manufacturer for four specialties: spine, trauma, foot and ankle, and shoulder and elbow.

DISCUSSION: Orthopaedic fellowship directors receive considerable funding from the medical industry. However, there exists an imbalance of some directors receiving notably higher amounts and with certain subspecialties commanding higher earnings. Due to the complex exchanges between medical device companies and physicians, it is important to examine the relationships present, especially for surgeons that influence the training of others. Accordingly, the goal of this study was to examine the funding orthopedic sub-specialty fellowship directors receive. Our results show that fellowship directors in shoulder and elbow and joints receive the most money from medical device companies. Additionally, only 10% of fellowship directors account for over 80% of the money exchanged, and most funding comes from a few companies. These findings highlight the need for transparency between directors and potential fellows as financial ties may impact the training received.

SIGNIFICANCE: Fellowship directors with significant funding may be less inclined to teach techniques requiring different products. Future endeavors should focus on applying fellows' perception of financial ties and examination of the funding received by other physicians training residents and fellows.

TABLES:

Subspecialty	No. Physicians	Median Amount (USD)	TVT (\$) *	Most Common Manufacturer
Joint Arthroplasty	116	16,919.76	24,337,146.50	Zimmer Biomet Holdings
Sports Medicine	91	8,006.10	5,049,923.55	Arthrex
Hand	85	1,200.00	1,079,137.31	Axogen
Spine	68	22,296.72	5,779,889.18	Stryker Corporation
Trauma	64	6,104.73	4,765,633.48	Stryker Corporation
Foot & Ankle	49	38,584.57	3,982,575.41	Stryker Corporation
Pediatrics	41	1,480.46	929,801.42	OrthoPediatrics
Shoulder & Elbow	34	75,580.42	11,632,851.14	Stryker Corporation
Musculoskeletal Oncology	18	348.09	53,965.48	Onkos Surgical

Table 1. Overview of payments made to orthopaedic subspecialties among their fellowship directors including the most common manufacturer.

*Total value transferred to that subspecialty.