

Initial National Survey on the Orthopaedic Surgery Residency Postgraduate Year One

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Residency training in orthopaedic surgery consists of a five- or six-year training experience in over 200 programs across the United States and Canada. While postgraduate year (PGY) two through five (or six) are typically spent solely under the guidance of the orthopaedic surgery department, the intern year (PGY-1) has changed over time. Historically, orthopaedic PGY-1 resident trained in general surgery before focusing on orthopaedic surgery in the later postgraduate years, which has more recently developed into an intern year spent on rotation in various departments that also includes a limited number of months spent training in orthopaedic surgery. Orthopaedic PGY-1 residents were allowed to spend up to three months on orthopaedic surgery rotations, with other rotations comprised of training in general surgery, musculoskeletal radiology, plastic surgery or neurosurgery, anesthesia, intensive care, emergency room, or other related fields. However, on July 1, 2012, as a part of the ACGME's Next Accreditation System, a revised Program Requirements for Graduate Medical Education in Orthopedic Surgery was put into effect with implementation by orthopedic surgery programs required by July 1, 2013, whereby orthopedic surgery PGY-1 residents were only allowed up to three months of orthopedic surgery rotations, they were now required to receive "six months of orthopaedic surgery rotations designed to foster proficiency in basic surgical skills, the general care of orthopaedic patients both as inpatients and in the outpatient clinics, the management of orthopaedic patients in the emergency department, and the cultivation of an orthopaedic knowledge base"¹.

We sought to assess how this increase in the amount of time spent on orthopaedic surgery rotations during PGY-1 affected the number of operative cases, closed reductions, and consults performed by orthopaedic PGY-1 residents. We further sought to characterize what responsibilities that orthopaedic residents had during PGY-1, as well as subjectively what the priority of responsibilities should be for orthopaedic PGY-1 residents and how well they were prepared for the responsibilities of PGY-2.

We designed and utilized an anonymous survey in conjunction to evaluate the opinions of orthopaedic residents and chairmen/program directors (PDs) on the orthopaedic surgery PGY-1. The

survey was 18 questions for residents and 19 questions for chairmen/PDs and was comprised of questions related to program demographics, PGY-1/intern year experience, personal evaluation of the PGY-1/intern year experience, and opinions on optimizing the orthopaedic PGY-1/intern year. Question types included were free response (i.e. How many operative cases did you perform?), Likert-style scales (i.e. Rate from 1 to 10 how well you were prepared to see consults at the level expected of an orthopaedic PGY-2 resident?), or ranking-style (i.e. Rank the order of importance for the responsibilities of an orthopaedic PGY-1 resident.). The survey was sent out electronically to residents and chairmen/PDs by the AOA in August 2013 and remained open for four weeks with a reminder sent at two weeks. Among residents, only PGY-2 through PGY-6 orthopaedic residents were eligible for inclusion in the survey, and exclusion criteria included those residents who did not complete their PGY-1 in a categorical orthopaedic residency program (i.e. had completed PGY-1 as a transitional year, preliminary year, or in a residency program in a different field).

The survey was started by 96 chairmen/PDs and 269 residents, with 74 chairmen/PDs and 113 eligible residents having completed the survey. We received completed surveys from chairmen/PDs in 29 states and Canada and from eligible residents in 29 states, including 48 PGY-2, 28 PGY-3, 21 PGY-4, and 21 PGY-5/6 residents.

Characterizing the orthopaedic PGY-1, 78% of chairmen/PDs stated that their PGY-1 residents had done three months of orthopaedic surgery the previous year, with 11% having done less than three months and 11% having done more than three months (including 5.5% that had done six months). Among residents, 73% had done three months of orthopaedic surgery during their PGY-1, 15% had done less than three months, and 12% had done more than three months (including 7% that had done six months).

Chairmen/PDs estimated their orthopaedic PGY-1 residents had performed or participated in 71 ± 72 operative cases (range 0-300), 45 ± 50 closed reductions (range 0-300), and 74 ± 106 consults (range 0-600), while the residents reported that they had performed or participated in 49 ± 48 operative cases (range 0-250, with an average of 16.2 per month of time spent on orthopaedic surgery rotation), 42 ± 45 closed reductions (range 0-254, with an average of 13.5 per month of time spent on orthopaedic surgery rotation), and 85 ± 80 consults (range 0-300, with an average of 27.0 per month of time spent on orthopaedic surgery rotation).

When asked to evaluate the orthopaedic PGY-1, 58% of chairmen/PDs stated that orthopaedic interns should spend more time on orthopaedic surgery rotations than they currently do, with 7% in favor or less time and 35% in favor of the same amount of time. Among orthopaedic residents, 88% favored more time on orthopaedic rotations with 1% and 11% in favor of less time and the same amount of time, respectively. Chairmen/PDs thought that the optimal amount of time spent on orthopaedic surgery rotations was 6.0 ± 2.1 months (range 1.5 to 12), while orthopaedic residents placed the optimal time at 6.7 ± 2.0 (range 1.5 to 12).

When ranking the order of importance of inpatient floor work, clinic/office, consults/emergency room work, and operating room cases to the orthopaedic surgery PGY-1 from 1 to 4 (1 = most important), chairmen/PDs and residents agreed that consults (2.0 ± 1.0 for chairmen/PDs and 1.5 ± 0.7 for residents) and then floor work (2.2 ± 1.1 for chairmen/PDs and 2.0 ± 1.0 for residents) were the most important. Chairmen/PDs felt that seeing patients in the clinic/office (2.6 ± 1.1) was more important than operating (3.2 ± 1.0), while residents felt that operating (3.1 ± 0.7) was more important than the clinic/office (3.3 ± 0.8). Notably, among both chairmen/PDs and residents, the range of rankings for all four categories (consults/emergency room, inpatient floor work, clinic/office, and operative cases) was 1-4, meaning that all four had at least one person who thought it was most important and at least one who thought it was least important. When asked to evaluate how well prepared their residents were for the responsibilities of PGY-2 on a scale from 1 (poor) to 10 (excellent) at the level expected of a PGY-2, chairmen/PDs rated their residents' overall preparation as 7.0 ± 2.0 (range 2-10), preparation to see consults as 6.8 ± 1.9 (range 3-10), preparation of closed reduction and splinting/casting skills as 6.9 ± 1.8 (range 3-10), and preparation of operative skills as 6.4 ± 2.0 (range 2-10).

In conclusion, we found wide variety among the experiences of orthopaedic surgery residents during PGY-1. This variety was noted in the number of months they spent on orthopaedic surgery rotations as well as the number of operative cases, closed reductions or splint applications, and consults they performed. Overall, chairmen/PDs felt that their residents were adequately prepared for the responsibilities of PGY-2. However, most chairmen/PDs and residents believed that more time should be spent on orthopaedic surgery rotations. The new ACGME guidelines will grant this increase as orthopaedic surgery interns will now be spending six months on orthopaedic surgery

rotations, and we plan to survey orthopaedic surgery chairmen/PDs and residents again in 2 years to quantify how this change has affected their experience and evaluation of the orthopaedic surgery PGY-1.

Reference

1. ACGME Program Requirements for Graduate Medical Education in Orthopaedic Surgery. Chicago, IL: Accreditation Council for Graduate Medical Education; focused revision September 30, 2012; effective July 1, 2013. Available from: https://www.acgme.org/acgmeweb/Portals/0/PFAssets/2013-PR-FAQ-PIF/260_orthopaedic_surgery_07012013.pdf.