

Prospective Analysis of a Novel Orthopedic Residency Advocacy Education Program

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ABSTRACT

INTRODUCTION: Future physician leaders must be able to critically assess health care policy and patient advocacy issues. Currently, no nationally accepted, standardized curriculum to provide advocacy education during orthopedic residency training exists. We therefore developed an “Advocacy” curriculum for our orthopedic residents designed to direct particular attention to patient advocacy, specialty advocacy, and healthcare policy.

METHODS: Residents were given pre- and post-curriculum questionnaires to gauge their perception of the importance, strengths, and weaknesses of this curriculum. A paired t-test was used to compare pre- and post-curriculum responses.

RESULTS: Twenty-one of 24 orthopedic residents completed the pre-curriculum and post-curriculum questionnaire regarding the importance of advocacy education (87.5% response rate). Overall, 85.7% (18/21) of responders ranked the curriculum on orthopedic advocacy as good or excellent. Prior to the advocacy curriculum, 33.3% (7/21) of residents felt that learning about orthopedic advocacy was important to their education, while following the curriculum 100% (21/21) felt so ($p < 0.05$). The percentage of residents who considered health policy to be important increased from 71.4% (15/21) to 95.2% (20/21) following the curriculum ($p < 0.05$). Following the advocacy curriculum, 90.5% (19/21) of responders would be interested in getting involved in orthopedic advocacy.

DISCUSSION: This curriculum significantly increased residents’ belief in the importance of advocacy issues. Following the curriculum, 100% of responding residents considered orthopedic advocacy education as important. An advocacy curriculum may serve as an integral preparatory educational core component to residency training.

KEYWORDS: Patient advocacy, advocacy curriculum, resident education, orthopedic surgery, health policy

INTRODUCTION

Residents are the future leaders of medicine, and the importance of having young physician involvement in health-care policy continues to grow as medicine becomes a more

complex environment. It is imperative that orthopedic residents understand healthcare policy as it pertains to graduate medical education, innovation, regulation, specialization, and of course, the rapidly changing relationships between hospitals, providers, and public and private payer networks.

Currently, there is no nationally recognized, standard curriculum to specifically address advocacy education during residency training with regard to these important topics. For this reason, Croft *et al*,¹ along with many other health policy experts, have argued the importance of implementing some kind of advocacy curriculum in medical education. The Accreditation Council for Graduate Medical Education² (ACGME) lists, “advocate for quality patient care and optimal patient care systems” as a common requirement amongst all training programs. Currently, however, pediatrics is the only field that has adopted advocacy training as part of formal curriculum. The ACGME Pediatrics Review Committee² specifically requires preceptors to educate residents about “the role of the pediatrician in child advocacy, including the legislative process.” The Pediatrics Department at Harvard Medical School demonstrated that advocacy training improves residents’ knowledge about access to care and instills competence in working with lawmakers and community leaders.³

Historically, the public has held medical providers to high standards while also holding physicians in high esteem. This tenant of the medical profession, coupled with the fact that musculoskeletal disease and disability accounts for approximately 8% of the U.S. GDP, creates a platform for advocacy by orthopedic surgeons.^{4,7} The Alpert Medical School of Brown University Department of Orthopaedics therefore developed an “Advocacy” curriculum for orthopedic residents, paying specific attention to patient advocacy and specialty advocacy, as well as overall health care policy. The goal of this novel curriculum was to provide residents with the tools needed to advocate for their patients’ health, public health, and the field of orthopedics in general. Furthermore, the program provided outcomes research on the impact that advocacy training has on orthopedic residents.

METHODS

Institutional review board exemption was obtained prior to initiating this study. A novel advocacy education curriculum was created for orthopedics residents and implemented

with GME and departmental funding. Residents received a series of lectures on specific advocacy-related topics and participated in grand rounds and journal clubs focusing on advocacy-based concepts. Some of the topics covered were geriatric advocacy and Medicare, orthopedics industry relationships, orthopedic state-specific advocacy, and under- and uninsured patients.

Residents were given pre- and post-curriculum questionnaires to gauge their perception of the relevance and importance, strengths, and weaknesses of this curriculum. Residents were also queried to determine if they had previously received education about these advocacy issues and if they did in what format did that education occur. Resident responses were blinded to the study members to maintain confidentiality. A paired t-test was used to compare pre- and post-curriculum responses. A p-value of <0.05 was used to determine statistical significance.

RESULTS

Twenty-one of 24 (87.5 % response rate) orthopedic residents completed the pre- and post-curriculum questionnaire regarding the importance of advocacy education. Prior to advocacy education curriculum, 76% (16/21) of responders indicated that they had never received any education about orthopedic specialty advocacy (**Table 1**). Eighty-six percent (18/21) of responders had received education about health advocacy, most commonly as lectures. Forty-eight percent (10/21) had received education specifically focusing on uninsured or underinsured patients, and again the most common format was lecture. None of the responders (0/21) had ever received education about orthopedic advocacy at the state level. All of the responders (20/20) thought that they should receive education about advocacy.

Following the novel advocacy curriculum, 85.7% (18/21) of responders ranked the curriculum on orthopedic advocacy as good or excellent (**Table 2**). Prior to the advocacy curriculum, 33.3% (7/21) of residents felt that learning about orthopedic advocacy was important or very important to their education, while following the curriculum 100% (21/21) felt this was important or very important ($p<0.05$). The percentage of residents who felt that health policy was important increased from 71.4% (15/21) to 95.2% (20/21) following the curriculum ($p<0.05$). The relevance of underinsured and uninsured advocacy increased from 66.6% (14/21) to 100% (21/21) ($p<0.05$) following this curriculum. The importance of education about state

Table 1: Pre-curriculum questionnaire responses

Questions regarding pre-curriculum advocacy education	Number of responders who have received education about the given topic (N=21)	Format(s) of education received by responders
Have you ever received any education about orthopedic specialty advocacy? If so, what type?	4	Lecture=3 Informal with Attending=1 Email=1 Meeting=1
Have you ever received any education about health advocacy? If so, what type?	18	Lecture=18 Informal with Attending=6 Email=3 Meeting=3 Online= 8 Other=1
Have you received any education about geriatric patient issues/advocacy? If so, what type?	21	Lecture=19 Informal with Attending=10 Email=3 Meeting=6 Online=2 Other=1
Have you ever received any education on health care reimbursement, payment methods, RVU, etc? If so, what type?	21	Lecture=17 Informal with Attending=9 Email=1 Meeting=2 Online=3 Other=1
Have you ever received any education about Medicare? If so, what type?	19	Lecture=15 Informal with Attending=9 Email=1 Meeting=1 Online= 2 Other=2
Have you ever had any education specifically focusing on uninsured and underinsured patients? If so, what type?	10	Lecture=8 Informal with Attending=5 Email=2 Meeting=2 Online=2 Other=2
Have you ever received any education about Orthopedic Advocacy at State Level, i.e., work of RI Orthopedic Society? If so, what type?	0	N/A

level advocacy increased from 40% (8/20) to 90.5% (19/21) ($p<0.05$) (**Figure 1**). Additionally, following the advocacy curriculum, 90.5% (19/21) of responders indicated an interest in getting involved in orthopedic advocacy as a resident or fellow.

DISCUSSION

Advocacy training in the field of orthopedics has neither been widely implemented nor extensively studied. To our knowledge, this study represents the first of its kind to examine

educational results of a novel orthopedic advocacy program. This curriculum significantly increased residents' belief in the importance of advocacy issues. Following the curriculum, 100% of residents considered orthopedic advocacy an important component of residency training. There was a statistically significant increase in the percentage of residents who placed high value on health care policy, underinsured and uninsured advocacy, and state level advocacy by the end of the curriculum.

Orthopedic advocacy provides residents with the knowledge and skill set to become advocates for their patients as well as leaders in the community and in the field of orthopedics in general. Additionally, advocacy training increases residents' self-esteem⁸ and instills a sense of confidence and optimism about healthcare.⁹

There are several obstacles to be aware of before initiating orthopedic advocacy training. Currently, there is a lack of federal funding for providing advocacy training within orthopedic residency programs. Financial or grant support, however, remains essential for implementation of appropriate and effective advocacy training in any residency curriculum.¹⁰ There has been much written about the effect that duty hour restrictions may have on the training of surgical residents.¹¹ However, most of the focus has been on the concern that surgical residents, including orthopedic residents, will have less time and spend fewer hours honing their surgical skills. The importance of advocacy training for residents is now being recognized across all specialties¹⁰ and the duty hour restrictions may serve as a prominent obstacle to formal incorporation of advocacy training into the orthopedic curriculum. Future research is required to determine the most relevant topics within advocacy and how to best incorporate advocacy training into existing curriculums.

This study had several limitations. This single institution experience may not be representative of other institutions programs with similar advocacy programs. Other programs should implement and study orthopedic advocacy education for their residents in an attempt to determine an optimal model. Additionally, fewer than 90% of the residents in this program completed our education program due to the fact that some residents did not attend sessions due to vacations, duty hour restrictions, and operating room cases. The residents who did not complete the pre- and post-curriculum survey, therefore, were not assessed for their

Table 2: Comparison data for pre-curriculum versus post-curriculum questionnaire responses

Questions regarding the importance of advocacy and assessment of advocacy curriculum	Pre-Curriculum Responses (N=21)	Post-Curriculum Responses (N=21)
How important to you and your education is orthopedic specialty advocacy?*	Neutral=11 Not Important=1 Somewhat Important=2 Important=6 Very Important=1	Neutral=0 Not Important=0 Somewhat Important=0 Important=13 Very Important=8
How Important to you and your education is learning about health policy?*	Neutral=2 Not Important=0 Somewhat Important=4 Important=9 Very Important=6	Neutral= 1 Not Important=0 Somewhat Important=0 Important=12 Very Important=8
How important to you and your education is learning about geriatric patient issues and advocacy?	Neutral=2 Not Important=0 Somewhat Important=1 Important=11 Very Important=7	Neutral=0 Not Important=0 Somewhat Important=1 Important=13 Very Important=7
How important to you and your education is learning about health care reimbursement, payment models, RVU, etc?	Neutral=0 Not Important=0 Somewhat Important=1 Important=8 Very Important=12	Neutral=0 Not Important=0 Somewhat Important=0 Important=8 Very Important=13
How important to you and your education is learning about Medicare?#	Neutral=0 Not Important=0 Somewhat Important=1 Important=10 Very Important=9	Neutral=1 Not Important=0 Somewhat Important=0 Important=11 Very Important=9
How important to you and your education is learning specifically focusing on uninsured and underinsured patients?*	Neutral=5 Not Important=1 Somewhat Important=1 Important=10 Very Important=4	Neutral=0 Not Important=0 Somewhat Important=0 Important=12 Very Important=9
How important to you and your education is learning about advocacy at State Level?#*	Neutral=6 Not Important=3 Somewhat Important=3 Important=7 Very Important=1	Neutral=2 Not Important=0 Somewhat Important=1 Important=13 Very Important=5
Would you be interested in getting involved in orthopedic advocacy as a resident and/or fellow if there was an opportunity?	Yes=18 No=3 Possibly=0	Yes=20 No=0 Possibly=1
Do you think residents should received education about advocacy?#	Yes=20 No=0 Possibly=0	Yes=21 No=0 Possibly=0
How would you rate the curriculum on orthopedic advocacy?	N/A	Neutral= 1 Fair=2 Good=11 Excellent=7

20 pre-curriculum responses

* p<0.05 for pre-curriculum versus post-curriculum responses

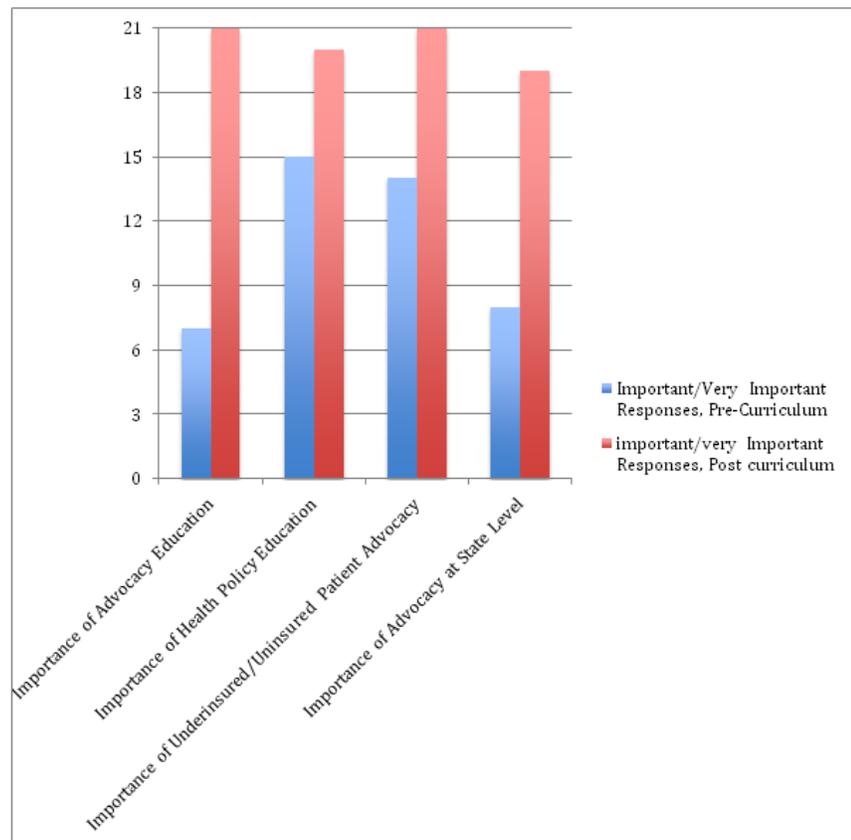
opinions regarding orthopedic advocacy. However, the strengths of this study include its prospective nature and the anonymity of the survey.

Future orthopedic leaders will clearly need the tools to be able to influence public policy. Physicians are likely the only group who truly understand the implications of policy decisions on their patients, their practice, and their specialty. We expect advocacy training to become an integral part of orthopedic residency training in all programs.

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Figure 1: Comparison of pre-curriculum to post-curriculum questionnaire responses with regard to the importance of various advocacy topics.



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