The Future of Rural Orthopaedic Practice: A COERG Resident Survey

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INTRODUCTION:

The CDC reports that 15% of all Americans live in rural areas (population <50,000). Residents of rural areas are older with higher rates of chronic illnesses, such as osteoarthritis, than those living in non-rural areas. Those living in rural areas also experience high rates of musculoskeletal injury. Unfortunately, access to care, including both urgent and elective orthopaedic care, for these complex patients is poor. In addition, rural residents may lack the financial means to travel to urban areas for care, may simply live too far away, or may prefer to receive their care locally. Residency programs continue to expand; however, this alone has not addressed the dearth of surgeons in rural communities. The total number of orthopaedic surgeons increased by 1.9% from 2013 to 2018, but the proportion of rural orthopaedic surgeons decreased by roughly 0.9%. There is almost no data to assess why orthopaedic surgery residents are not choosing to practice in rural communities despite the overwhelming need for their services.

The purpose of this study was to understand the views of orthopaedic surgery residents on future rural practice and the key factors influencing their decisions. Understanding why trainees are or are not interested in rural practice will offer valuable insights to orthopaedic and healthcare leaders working to address gaps in rural orthopaedic care.

METHODS:

A 22-question survey was created in REDCap. Questions captured basic individual demographic information, information about the participant's training program, future practice plans, interest in rural practice, and reasons for or against practice in rural areas. Interested orthopaedic surgery residency Program Directors (PD) at various institutions were identified through the Collaborative Orthopaedic Education Research Group's (COERG) database. A letter of invitation to participate was sent to the program directors at interested institutions, who forwarded the survey link to all residents in their program.

Of the 29 program directors expressing interest in the study, 16 (55.17%) confirmed they had forwarded the survey to their trainees. Demographics were compared by responses to interest in future rural practice: yes, no, and maybe (have or haven't considered rural practice).

RESULTS:

107 residents (no fellows) completed the survey (25 women, 82 men) from a total of 404 residents (26.7% response rate). These results are shown in Table 1. Only 6 (5.6%) of respondents plan to practice in rural areas, and of these, only 3 plan to have a full-time rural practice. 32 (30%) respondents said they plan to never practice in a rural area. There were no statistical differences in interest in rural practice plans based on gender or having children. However, those from a hometown with <50,000 were more likely to plan on or consider rural practice.

The primary reasons given for wanting to practice in a rural area were having grown up in these areas, wanting to be close to family, and the recreational activities available. The primary drivers against considering rural practice were lack of recreational activities, family preferences, and personal wellbeing. Reasons for or against interest in rural practice are shown in Tables 2 and 3.

DISCUSSION AND CONCLUSION:

This is the first study that examines the interests of current orthopaedic surgery trainees in practicing in rural areas. Given the gap between patient need and access to orthopaedic surgeons in rural areas, it's important to understand why current trainees are not considering rural practice. While prior data has indicated that those with subspecialty training are less likely to practice in rural areas, the respondents to this survey seemed to have less concern with available case complexity. There was also less concern about debt and compensation. Interestingly, the primary reasons both for and against rural practice are similar: availability of recreation and family preferences. As those interested in rural practice were more likely to be from smaller towns, supporting the work of medical schools and others recruiting students from rural areas may eventually help to address the deficit of orthopaedic surgeons. However, if trainees are also concerned about the willingness of their families or significant others to live in rural areas, that could speak to the need to have more rural training experiences (elective rotations or dedicated training tracks) for residents and fellows: if they can start planning their lives in these communities, they may be more likely to stay. In addition, these experiences can provide first-hand opportunities to learn about rural living, including the recreational opportunities available. The 70% of trainees who were not definitive "no" to rural practice may provide opportunities for support, education, and intervention. Limitations of this study include the sample size and response rate.

Given the prevalence of orthopaedic conditions among those living in rural America, there is a need for more orthopaedic surgeons to practice in these areas. Addressing this issue is complex and will require collaboration among educators at all levels- including medical schools, local community leaders, orthopaedic surgeons, and professional associations.

Table 1. Demographics of Participants

Practice rural in future	Never	Combined, Yes and Maybe	P Value (Fisher Test)
Number of participants	32 (30%)	75	
Man	23	59	0.447
Woman	9	16	
No children at time of survey	30	82	0.222
Had children at time of survey	2	13	
Hometown size <50,000	5	32	0.011
Hometown size 50,000-100,000	4	16	
Hometown size 100,000-500,000	8	12	
Hometown size 500,000-1,000,000	5	5	
Hometown size >1,000,000	10	10	

Table 2. Reasoning for/against rural practice

For	
Recreational Activities	6 (100%)
From Rural Area	4 (67%)
Small Community	4 (67%)
Close to Family	3 (50%)
Breadth of Practice	2 (33%)
Compensation	2 (33%)
Cost of Living	2 (33%)
Against	
Insufficient Recreation	31 (97%)
Family Preference	21 (66%)
Personal Wellbeing	19 (59%)
Access to Resources	13 (41%)
Subspeciality Focus	13 (41%)
Subspecialist Access	12 (38%)
Exposure	10 (31%)
Academic Interests	9 (28%)
Call Schedule	6 (19%)
Compensation	6 (19%)
Case Complexity	5 (16%)
Educational Debt	2 (6%)