

Work Satisfaction and Retirement Plans of Orthopaedic Surgeons 50 Years of Age and Older

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Received: 8 May 2007 / Accepted: 21 September 2007
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Abstract Retirement age and practice patterns before retirement are important for making accurate workforce predictions for orthopaedic surgeons. A survey of orthopaedic surgeons 50 years of age and older therefore was conducted by the American Academy of Orthopaedic Surgeons in cooperation with the Association of American Medical Colleges Center for Workforce Studies. The survey focused on three questions: (1) At what age do orthopaedic surgeons retire? (2) Do they stop working abruptly or do they work part time before retirement? (3) What are the major factors that determine when an orthopaedic surgeon retires? According to the survey, the median retirement age for orthopaedic surgeons was 65 years. Nineteen percent of orthopaedic surgeons worked part time before retirement. Decreasing reimbursement and increasing malpractice costs were consistently cited as

factors that strongly influenced retirement plans. Career satisfaction was high and was the strongest factor that kept the respondents in the workforce. The option to work part time would have the most impact on keeping orthopaedic surgeons working past the age of 65 years.

Level of Evidence: Level IV Economic and Decision Analyses. See the Guidelines for Authors for a complete description of levels of evidence.

Introduction

Retirement age and practice patterns before retirement are critical factors in making accurate workforce predictions for orthopaedic surgeons [1, 5]. A previous study investigated attitudes about retirement of orthopaedic surgeons [6]. Other surgical specialties have been surveyed regarding retirement demographics and plans [2–4, 7].

The American Academy of Orthopaedic Surgeons (AAOS), in cooperation with the Association of American Medical Colleges (AAMC) Center for Workforce Studies, surveyed orthopaedic surgeons 50 years of age and older. The survey focused on three questions: (1) At what age do orthopaedic surgeons retire?; (2) Do they stop working abruptly or do they work part time before retirement?; and (3) What are the major factors that determine when an orthopaedic surgeon retires?

Materials and Methods

The AAOS, in cooperation with the AAMC Center for Workforce Studies, administered a four-page survey (Appendix 1) by mail to a random sample of 3001

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Each author certifies that his or her institution has approved or waived approval for the human protocol for this investigation and that all investigations were conducted in conformity with ethical principles of research.

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Table 1. Demographics of respondents

Demographic	Value
Total number of respondents	1005
Average age (years)	63
Number of male respondents	939
Number of female respondents	66
Respondents ≤ 55 years old (%)	25
Respondents ≥ 70 years old (%)	25
Respondents with MD degrees in the US (%)	88
Respondents ABOS certified (%)	98

ABOS = American Board of Orthopaedic Surgery.

members of the AAOS in the Active and Emeritus Fellows' membership categories who were 50 years or older (18% of the fellowship). Distribution was by fax to a sample of 2015 and by mail to the remainder. Of the sample of 3001 members, 70% were Active Fellows and 30% Emeritus Fellows.

Data were analyzed by frequencies and descriptive statistics so no power analysis was done. Comments were coded into similar categories of responses for ease of analysis. The final sample included 1005 respondents for a response rate of 33.5% (Table 1). The 95% ± 5% confidence interval was 3%. Comparative analysis to the overall AAOS fellows 50 years and older showed the respondents to be representative of this population. One half of the respondents were between 55 and 70 years of age. Sixty-six women members (6.8%) responded to the workforce study, which is twice the percentage found in this membership category. The distribution of the respondents in subspecialty areas reflected the distribution of orthopaedic surgeons in the 2004 AAOS database. The only focus area that was larger than expected from the respondents was "disability/legal orthopaedics." Seventeen percent of the respondents reported this category as a focus.

Results

Twenty-one percent of the respondents were retired (Table 2). Of the retired physicians surveyed, 14% retired at 65 years of age. Of the remaining, ½ retired younger than 65 years and ½ older than 65 years. Approximately ½ reported they retired when they expected to retire. Thirty-eight percent retired earlier than expected. Nine percent retired later than expected. Thirty percent of those surveyed had no plans to retire from patient care. The remaining practicing orthopaedic surgeons planned to retire from patient care at a mean age of 65.6 ± 6.0 years. The mean number of years of practice remaining was 6.2 ± 6.0 years for this group.

Table 2. Results of the survey

Parameter	Value
Practice patterns	
Full time active (%)	59
Part time active (%)	19
Retired (%)	21
Number of female respondents	66
Part time active (%)	29
Focus area for part-time respondents	
Surgical specialties (%)	65
Nonsurgical specialties (%)	35
Mean number of hours worked per week	
Full time	57
Part time	21
Practice setting for full-time respondents	
Private group practice (%)	60
Practice setting for part-time respondents	
Private group practice (%)	36
Active orthopaedist with part-time option (%)	66
Satisfaction	
Very or somewhat with medicine (%)	84
Very or somewhat with orthopaedic surgery (%)	80
Retirement plans	
Plan to retire at 65.6 years (%)	60
No plans to retire (%)	30
Retired	
When expected (%)	53
Earlier than expected (%)	38
Later than expected (%)	9
High practice viability	
Private group practice (%)	65
Academic practice (%)	36

Of the AAOS members surveyed, 59% practiced full time and 19% practiced part time. Part-time practitioners are distributed across a broad range of practice settings (solo practice, teaching hospital, federal government, health maintenance organization). The option to practice part time is not universally available. For ⅓ of the full-time surgeons, a part-time option was not available, but they were interested in having it as an option. An additional 43% reported there was a part-time option they were not using. One-half of those with a part-time option were considering using this option in the future.

The factors most frequently cited affecting retirement plans were increasing malpractice costs, increasing regulation of medicine, and insufficient reimbursement. The most common reasons keeping respondents actively practicing orthopaedic surgery were high career satisfaction, followed by financial needs and a part-time option or

flexible scheduling. Career satisfaction was high in full-time and part-time respondents, with more than 80% reporting high satisfaction with the practice of medicine and specifically the practice of orthopaedic surgery.

Discussion

Retirement age and practice patterns before retirement are critical factors in making accurate workforce predictions for orthopaedic surgeons [1, 5]. The AAOS, in cooperation with the AAMC Center for Workforce Studies, surveyed orthopaedic surgeons 50 years of age and older. The survey focused on three questions: (1) At what age do orthopaedic surgeons retire?; (2) Do they stop working abruptly or do they work part time before retirement?; and (3) What are the major factors that determine when an orthopaedic surgeon retires?

One major limitation of our study is that the response rate to the survey of 33% calls into question selection bias. It is difficult to obtain higher response rates to a four-page survey without incentives. The demographics of the respondents matched the AAOS database except there were more women respondents. This similarity in demographics indicates we had a representative sample. The other major limitation is that the survey was designed by the AAMC with no definitions of terms such as financial viability and no questions specific for orthopaedic surgeons. It will be interesting to compare the orthopaedists' response with the responses in other specialties surveyed by the AAMC. Additional study should focus on exploring options for part-time orthopaedic employment for those 50 years of age or older. The rising importance of increasing malpractice costs and reimbursement issues require careful monitoring.

At what age do orthopaedic surgeons retire? We found practicing orthopaedic surgeons planned to retire at an average age of 65 years. However, 30% of those surveyed had no plans to retire, which would increase that age once all respondents retired. The retired orthopaedic surgeons surveyed retired at a median age of 65 years. However, only 14% retired at age 65 years. In the survey by Ritter et al. [6], the average retirement age was 66 years, which is slightly higher than the age found in our survey.

Do orthopaedic surgeons stop working abruptly or do they work part time before retirement? Currently, 19% of orthopaedists 50 years of age or older work part time. This option is not factored into current workforce studies [5]. This part-time option may be more popular in the future as it becomes more universally available and used. The part-

time orthopaedists in our study worked 20 hours per week often in a nonsurgical oriented subspecialty such as disability or legal orthopaedics.

What are the major factors that determine when an orthopaedic surgeon retires? Increasing malpractice costs, decreasing reimbursement issues, and increasing regulation of medicine are factors in orthopaedic surgeons retiring before the age of 65 years. High career satisfaction may keep orthopaedic surgeons practicing beyond the age of 65 years. The survey is limited in not further exploring these broad categories. In the survey of Ritter et al. [6], changes in healthcare and increasing malpractice costs made up only 12% of the reasons for retirement, a lower percentage than in our survey [6]. The difference in the two surveys may reflect the increasing importance of these factors during last 7 years.


Federal law prohibits mandatory retirement or withdrawal of operating privileges based on age [2]. Greenfield and Proctor [2] found, in a survey of the American Surgical Association, 50% of surgeons had no retirement plans, which is a higher percentage than in our study. The majority surveyed favored withdrawal of privileges based on peer review or disability rather than age [2]. The level of activity declined between 60 and 70 years as it did in our survey, but in their survey, 18% performed surgery beyond the age of 70 years [2]. The average age of retirement for general surgery fellows increased from 60 years in 1984 to 63 years in 1995 [3, 4]. A far smaller survey of neurosurgeons found an average retirement age of 60 years [7]. Reasons for retirement included decreasing personal satisfaction and financial rewards, a desire to pursue other activities, and local rules mandating retirement [7]. These studies attempted to survey age-related differences in verbal and performance intelligence quotients [2]. Our study made no attempts to assess cognitive abilities. Greenfield and Proctor [2] and Rovit [7] cited competence assessment should be an area of future study.

This survey of orthopaedic surgeons 50 years of age and older resulted in a planned and an actual average retirement age of 65 years. Nineteen percent worked part time before retirement and this part-time work currently is not factored into workforce studies [5]. Increasing malpractice costs and the increased regulation of medicine are major factors in the decision to retire and these factors are a growing concern. Career satisfaction with medicine and orthopaedic surgery remains very high.

Acknowledgments We thank Edward S. Salsberg, Director of the Center for Workforce Studies for the AAMC, for developing the survey and for valuable input into the manuscript. Reprinted with permission from the American Academy of Orthopaedic Surgeons.

Appendix A

Survey of Orthopaedic Surgeons Over 50 Questionnaire



Survey of Orthopaedic Surgeons Over 50

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

This questionnaire is designed to obtain information from Orthopaedic Surgeons aged 50 and over regarding current and future practice and retirement plans. All responses will be kept strictly confidential and presented only in aggregate.

1. Are you currently active in medicine?
 (Active in medicine includes providing clinical services, conducting medical research, medical teaching, health-care administration and other professional medical activities.)

Yes, full-time in medicine
 Yes, part-time in medicine
 No, FULLY retired from medicine → Skip to Q18 (C. RETIRED PHYSICIANS)
 No, temporarily not active in medicine → Skip to Q22 (D. FACTORS AFFECTING RETIREMENT)
 Never active in medicine → Skip to Q27 (E. BACKGROUND INFORMATION)

} Continue to Q2 (A. ACTIVE PHYSICIANS)

A. ACTIVE PHYSICIANS If you are currently active in medicine, answer Questions 2 through 10.

2. During your most recent complete week of work, approximately how many hours were you active in medicine (including on-call time while you were actively engaged in patient care or coordination)?

hrs/week

3. Approximately what percent of your time mentioned above was spent in the following activities?

	0	10	20	30	40	50	60	70	80	90	100
Patient care*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching/Precepting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Care Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Patient Care includes clinical practice, related office work, communications with hospitals/physicians regarding patients and other related activities.

4. Did you increase, maintain, decrease or eliminate the number of hours devoted to the following activities in the past 3 years?

	Increased	No Change	Decreased	Eliminated	N/A
Patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching/Precepting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Care Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, specify:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

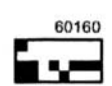
5. Which of the following best describes your current principal setting where you spend the majority of your time in medicine? (Mark one)

- Solo Practice
- Group Practice/Partnership
- Ambulatory Clinic/Urgent Care Center
- Teaching Hospital
- Non-teaching Hospital
- Medical School
- HMO/Managed Care Organization
- Federal Government (VA, military, etc.)
- State or Local Government
- Other (Private Industry, Nursing Home/Hospice, Home Health, Professional Association, etc.)

6. What is the zip code of this location? →

City/Town:
 State:

If zip code is unknown, provide its location.



7. If you marked "Group Practice" or "Ambulatory Clinic" in Q5, answer the following questions.

a. Is your practice a single-specialty or multiple-specialty practice? Single-specialty Multiple-specialty

b. Are you the owner or partner of the practice? Owner Partner Neither

c. How many physicians (full- and part-time) are in your group practice/clinic? (Please include yourself) →

8. Are you part of a faculty practice plan? Yes No

9. How satisfied or dissatisfied are you with each of the following?

	Very Satisfied	Somewhat satisfied	Neither satisfied or dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	N/A
Medicine as a career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your specialty/subspecialty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your current position	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amount of time with each patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How does your current level of satisfaction with medicine compare to your satisfaction 3 years ago?

- Much more satisfied currently
- Somewhat more satisfied
- About the same
- Somewhat less satisfied
- Much less satisfied

B. PATIENT CARE If you are currently providing patient care or did so in the past, answer Questions 11 through 17. If you have never provided patient care, skip to Question 22.

11. At what age do you plan to stop (or did you stop) providing patient care?

- I plan to stop(stopped) at age: → age
- I do not currently have plans to stop providing patient care.

12. In my work setting, part-time work hours are:

- Available and I currently work part-time.
- Available and I am considering this for the future.
- Available but I do not work part-time.
- Not available but I would like the option.
- Not available and I would not be interested if they were.

13. Which best describes the scope or range of patient care you currently provide compared to 3 years ago?

- Significantly expanded
- Slightly expanded
- Provided about the same
- Slightly decreased
- Significantly decreased
- I was not providing patient care
- Don't recall

14. During your most recent complete week of work, approximately how many hours did you spend seeing or caring for hospitalized patients?

→ hrs

15. Which best describes the amount of time you currently spend with hospitalized patients compared to 3 years ago?

- Significantly more
- Slightly more
- About the same
- Slightly less
- Significantly less
- Stopped providing the care
- Uncertain
- N/A

16. What is the typical waiting time for an appointment in your practice?

	1-2 days	Less than 1 week	1-2 weeks	2-3 weeks	1-2 months	3+ months
Non-emergency, existing patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. How economically viable is your current practice?

- Extremely viable
- Very viable
- Somewhat viable
- Marginally viable
- Not viable at all
- NA / Unknown

→ Skip to Q22. (D. FACTORS AFFECTING RETIREMENT)



C. RETIRED PHYSICIANS If you are retired from medicine, answer Questions 18 through 21.

18. At what age did you retire? \rightarrow age

About when expected \rightarrow Skip to Q22

19. Did you retire earlier or later than planned or expected? Later \rightarrow Skip to Q20

Earlier \rightarrow Skip to Q21

20. If you retired later than expected, what are the reasons that you deferred retirement? (Mark all that apply)

- Couldn't recruit a replacement
- Practice income was very good
- Couldn't afford to retire
- High level of career satisfaction
- Other, specify:

\rightarrow Skip to Q22

21. If you retired earlier than expected, what were the reasons for your early retirement?

- Elective career change
- Practice not economically viable
- Personal health issues/concerns
- Need to care for family member(s)
- Insufficient reimbursement rates
- Rising medical malpractice premiums
- Lack of professional satisfaction
- Improvement in retirement finances
- Inadequate practice volume
- Hard to keep up with clinical advances
- Other, specify:

D. FACTORS AFFECTING RETIREMENT PLANS If you are active in medicine or were active in the past, please answer Questions 22 through 26.

22. When you think about your retirement (future or past), how important are/were the following?

	Not important	Somewhat important	Very important	Uncertain / N/A
Rising malpractice costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effort needed to keep up with clinical advances and changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recertification requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing regulation of medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreasing clinical autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing competition within my specialty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient reimbursement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-call responsibilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of professional satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress of practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal health issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased family responsibilities (e.g., child care, elder care, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interest in pursuits that are not related to medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupation safety issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, specify: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. If you could afford it, would you retire from medicine today?

- Yes No Already retired Don't know

24. Are you currently working for pay in a field other than medicine?

- Yes \rightarrow Please describe:
 No

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25. How important are/were the following factors in motivating you to remain active in medicine?

	Not important	Somewhat important	Very important	Uncertain / N/A
Career satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial needs or obligations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good income	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needs of my patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty recruiting a replacement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Need for health insurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, specify:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. How would/did the following affect your willingness to remain active in medicine past your expected retirement age?

	Not affect at all	Somewhat affect	Significantly affect	Uncertain / N/A
Less paperwork	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of changing specialties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of part-time work and/or more flexible scheduling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

E. BACKGROUND INFORMATION Regardless of your status in medicine, please answer Questions 27 through 38.

27. Year of Birth: →

28. Gender: Female Male

29. Marital Status: Married/Partner Divorced/Separated Widowed Single

30. Number of dependents for which you are responsible excluding yourself (e.g., spouse, children, parents, etc.): 0 1 2 3 4 5 6 7 8 9 10+

31. Race: Asian or Pacific Islander Black/African American Native American/Alaskan White Multiple Races Other, specify:

32. Are you of Hispanic Origin? Yes No

33. How would you rate your overall health status? Very good Good Fair Poor

34. How would you rate your current financial status? Very good Good Fair Poor

35. Please provide the information on your undergraduate medical education:

Degree Type: MD DO MBBS/MBChB

Location of medical school: United States Canada Other Country, specify:

Year of Graduation: →

36. When did you complete your most recent graduate medical training (residence, fellowship)? →

37. Do you have any other degree(s)? PHD MPH MBA JD Other (Describe)

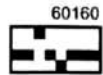
38. What is your primary specialty (specialty in which you currently spend the most hours weekly) and secondary specialty?

Primary: **Board Certified?** Yes No

Secondary: **Board Certified?** Yes No

Please provide any additional comments about your plans to retire, reduce hours, or change your practice:

Thank you for taking the time to help us in this study. Please return your completed questionnaire BY FAX TO: (847) 574-7493 or by mail to: AAOS, Dept of Research, 6300 N. River Rd, Rosemont, IL 60016. If you have any questions about the questionnaire or the study, please email Edward Salsberg, Director of the AAMC Center for Workforce Studies (esalsberg@aaamc.org).



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