

## TABLE E-1

### ORTHOPAEDIC CHAIR RESEARCH SURVEY

#### DEMOGRAPHICS and PRACTICE CHARACTERISTICS

*Please describe the following personal characteristics by writing in or circling the appropriate response:*

1. How long have you been a department/division chair: \_\_\_\_\_ yrs
2. Sex:  
M      F
3. What is your research training background?
  - A. On the job research training only
  - B. At least 1 year dedicated to research training
  - C. Masters degree or equivalent in research field
  - D. PhD or equivalent in research field
4. How many full time faculty are in your department?
  - A. < 10
  - B. 10-19
  - C. 20-29
  - D. 30-39
  - E. 40-49
  - F. 50 or more
5. Do the following statements describe your academic practice:
  - A. Y      N      Are you currently active in clinical research?
  - B. Y      N      Are you currently active in basic science research?
  - C. Y      N      Are you currently the recipient of an extramural research grant?

## RESEARCH POLICY AND INCENTIVE

The following 4 questions assess opinions concerning research policy and incentives; please choose 1 response or list 3 responses as requested for each question or subquestion:

6. Would the following policies lead residents to pursue MORE, NO more or less, or LESS research as a part of their orthopaedic career after completion of residency (CHOOSE 1)?

- |    |      |    |      |  |
|----|------|----|------|--|
| A. | MORE | NO | LESS | Debt forgiveness of up to 1/2 of your total educational debt   |
| B. | MORE | NO | LESS | Debt forgiveness of all educational debt   |
| C. | MORE | NO | LESS | Increase in musculoskeletal research funding opportunities (from NIH, OREF, etc.)  |
| D. | MORE | NO | LESS | Salary "equivalent" to "full-time" surgeons within your department/practice  |
| E. | MORE | NO | LESS | Guaranteed protected time until research projects are established & funded   |
| F. | MORE | NO | LESS | Guaranteed start-up funding package for research equipment, supplies and personnel   |
| G. | MORE | NO | LESS | Chairman who is supportive of research within department   |
| H. | MORE | NO | LESS | The expressed opinions of leaders in academic orthopaedics that more clinician-scientists (clinicians who do research) are needed in orthopaedic surgery |
| I. | MORE | NO | LESS | The expressed "support" for clinician-scientists (clinicians who do research) by leaders in academic orthopaedics  |
| J. | MORE | NO | LESS | Department practice/culture that is supportive of research by surgical staff   |
| K. | MORE | NO | LESS | Early recruitment (during residency) by departments to join faculty  |
| L. | MORE | NO | LESS | More opportunities for post-residency research fellowships   |

7. Which 3 of the policies in Question 6 are you most willing to support (LIST 3)?

- A. Letter \_\_\_\_  
 B. Letter \_\_\_\_  
 C. Letter \_\_\_\_

8. IN GENERAL, do you think that the following policies are likely to increase or decrease research interest in most orthopaedic residents? (Chose one from the choices of INCrease, NO effect, DECrease)

- |    |     |    |     |   |
|----|-----|----|-----|---|
| A. | INC | NO | DEC | Mandatory requirement of all residents to complete at least one full year of research (in addition to 5 clinical years including internship)      |
| B. | INC | NO | DEC | Increased research requirement during residency (without extending total training time)   |
| C. | INC | NO | DEC | Increased protected research time (time to design, execute, analyze and present) during residency (without extending total training time)         |
| D. | INC | NO | DEC | Increased funding for research (design, execution, analysis, presentation) during residency (without extending total training time)               |
| E. | INC | NO | DEC | Open option to take a year-out between any two given residency years to conduct full time research  |
| F. | INC | NO | DEC | Didactic curriculum designed to introduce residents to research fields/options in orthopaedics  |
| G. | INC | NO | DEC | Early acceptance into residency (during medical school) with commitment to spend at least one year conducting full-time research during residency |
| H. | INC | NO | DEC | Increased emphasis on research in resident recruiting process   |

9. Which 3 of the policies in Question 8 are you most willing to support (LIST 3)?

- A. Letter \_\_\_\_  
 B. Letter \_\_\_\_  
 C. Letter \_\_\_\_

## RESEARCH POLICY AND INCENTIVE (continued)

10. In general, how important is orthopaedic research to the clinical practice of orthopaedic surgery?
- A. Very important
  - B. Somewhat important
  - C. Not important
11. In general, how important is orthopaedic research (performed by orthopaedic surgeons) to the clinical practice of orthopaedic surgery?
- A. Very important
  - B. Somewhat important
  - C. Not important
12. Should orthopaedic surgery as a field support policies that provide financial incentives for surgeons to perform research?
- Y      N
13. As a Chair are you willing to support a departmental policy that would help subsidize the research endeavors of a fellow surgeon (with a less than "full" clinical load) in your department (i.e., have "full time" clinical faculty accept a lower salary to help support a research salary or to fund research)?
- Y      N
14. The AAOS and OREF provide information and programs to support the research efforts and careers of orthopaedic surgeons interested in research; with this in mind, please select Yes or No to the following questions:
- |    |   |   |   |
|----|---|---|---|
| A. | Y | N | Are you aware of the existence of the AAOS Clinician-Scientist Program Committee?   |
| B. | Y | N | Are you aware of any of the 10 priorities and strategies as put forth by the AAOS Clinician-Scientist Program Committee?  |
| C. | Y | N | Are you aware of the AAOS/OREF Clinician-Scientist time line and resources available on the web?  |
| D. | Y | N | Would you encourage your residents to use the resources provided by the AAOS/OREF that support research activities (i.e., grants, web resources, development programs, mentoring, fellowships)? |
15. (Optional) In the space below, please elaborate on any issue that you feel is important to improving research in orthopaedic surgery; please feel free to continue on the back of this sheet.

## TABLE E-2

### ORTHOPAEDIC RESIDENT RESEARCH SURVEY

#### DEMOGRAPHICS

Please describe the following personal characteristics by writing in or circling the appropriate response:

16. Age: \_\_\_\_\_ Years old

17. Sex (circle one):

M          F

18. Do you consider yourself as part of an underrepresented minority group in medicine (circle one)?

Y          N

19. At what stage are you in your training?

- A. Intern or equivalent (currently in 1<sup>st</sup> year of post graduate clinical training OR have not yet started 2<sup>nd</sup> year of clinical orthopaedic training due to research or other activities)
- B. Junior resident (currently in 2<sup>nd</sup> or 3<sup>rd</sup> year out of 5 total of clinical orthopaedic training)
- C. Senior resident (currently in 4<sup>th</sup> or 5<sup>th</sup> year out of 5 total of clinical orthopaedic training, include 6<sup>th</sup> superchief year)

20. How much total educational debt do you currently have (circle one)?

- A. none
- B. > \$0 to \$50,000
- C. > \$50,000 to \$100,000
- D. > \$100,000

## RESEARCH BACKGROUND AND INTENT

The following questions assess your research background; please choose (circle) 1 response for each question or subquestion:

21. Time spent conducting full time research

- A. < 1 yr
- B. > or = 1 yr but not PhD or equivalent
- C. PhD or equivalent

22. Type of research conducted

- A. orthopaedic/musculoskeletal
- B. non orthopaedic/musculoskeletal
- C. both

23. Participation in research grants (NOT training grants)

- A. no experience
- B. participated in writing of grant/s but not primary recipient
- C. author and primary recipient of research grant/s

24. Authorship of manuscripts (NOT abstracts/posters/presentations)

- A. no authorship to date
- B. author on one or more case reports or reviews but no original research
- C. non-primary author on one or more original research manuscript/s
- D. primary author on one or more original research manuscript/s

25. As part of your residency training, are you committed to participate in a year of research (in addition to the usual 5 years of clinical training)?

Y      N

26. Do the following statements describe your residency program?

- A. Y      N      All residents are required to participate in a year of research (in addition to 5 years of clinical training)
- B. Y      N      There is an optional track that includes a year of research (in addition to 5 years of clinical training)

27. How would you rate your current likelihood of pursuing research as part of your career after residency/fellowship?

- A. Definitely
- B. Likely
- C. Unsure
- D. Unlikely
- E. Definitely not

28. In your ideal practice, the percentage time spent on academic activities including research would be:

- A. 0%
- B. > 0% up to 20%
- C. > 20% up to 40%
- D. > 40% up to 60%
- E. > 60% up to 80%
- F. > 80% but < 100%
- G. 100%

29. In what type of research are you most likely to engage after completion of training (CHOOSE ONLY 1)?

- A. Clinical/epidemiologic/outcomes
- B. Biomechanics
- C. Bioengineering
- D. Basic science

- E. Policy/economics/health services
- F. Other research not listed
- G. No research

#### RESEARCH POLICY AND INCENTIVE

The following 4 questions assess opinions concerning research policy and incentives; please choose 1 response or list 3 responses as requested for each question or subquestion:

30. Would the following policies lead you to pursue MORE, NO more or less, or LESS research as a part of your orthopaedic career after completion of residency (CHOOSE 1)?

- |    |      |    |      |  |
|----|------|----|------|--|
| A. | MORE | NO | LESS | Debt forgiveness of up to 1/2 of your total educational debt   |
| B. | MORE | NO | LESS | Debt forgiveness of all educational debt   |
| C. | MORE | NO | LESS | Increase in musculoskeletal research funding opportunities (from NIH, OREF, etc.)  |
| D. | MORE | NO | LESS | Salary "equivalent" to "full-time" surgeons within your department/practice  |
| E. | MORE | NO | LESS | Guaranteed protected time until research projects are established & funded   |
| F. | MORE | NO | LESS | Guaranteed start-up funding package for research equipment, supplies and personnel   |
| G. | MORE | NO | LESS | Chairman who is supportive of research within department   |
| H. | MORE | NO | LESS | The expressed opinions of leaders in academic orthopaedics that more clinician-scientists (clinicians who do research) are needed in orthopaedic surgery |
| I. | MORE | NO | LESS | The expressed "support" for clinician-scientists (clinicians who do research) by leaders in academic orthopaedics  |
| J. | MORE | NO | LESS | Department practice/culture that is supportive of research by surgical staff   |
| K. | MORE | NO | LESS | Early recruitment (during residency) by departments to join faculty  |
| L. | MORE | NO | LESS | More opportunities for post-residency research fellowships   |

31. Which 3 of the policies in Question 30 would provide you the most incentive to pursue research (LIST 3)?

- A. Letter \_\_\_\_
- B. Letter \_\_\_\_
- C. Letter \_\_\_\_

32. IN GENERAL, do you think that the following policies are likely to increase or decrease research interest in most orthopaedic residents? (Chose one from the choices of INCRease, NO effect, DECRease)

- |    |     |    |     |   |
|----|-----|----|-----|---|
| A. | INC | NO | DEC | Mandatory requirement of all residents to complete at least one full year of research (in addition to 5 clinical years including internship)      |
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| F. | INC | NO | DEC | Didactic curriculum designed to introduce residents to research fields/options in orthopaedics  |
| G. | INC | NO | DEC | Early acceptance into residency (during medical school) with commitment to spend at least one year conducting full-time research during residency |
| H. | INC | NO | DEC | Increased emphasis on research in resident recruiting process   |

33. Which 3 of the policies in Question 32 do you think are the most likely to increase interest in research among orthopaedic residents (LIST 3)?

- A. Letter \_\_\_\_
- B. Letter \_\_\_\_
- C. Letter \_\_\_\_

## RESEARCH POLICY AND INCENTIVE (continued)

34. In general, how important is orthopaedic research to the clinical practice of orthopaedic surgery?
- A. Very important
  - B. Somewhat important
  - C. Not important
35. In general, how important is orthopaedic research (performed by orthopaedic surgeons) to the clinical practice of orthopaedic surgery?
- A. Very important
  - B. Somewhat important
  - C. Not important
36. Should orthopaedic surgery as a field support policies that provide financial incentives for surgeons to perform research?
- Y      N
37. If you were an orthopaedic surgeon on staff with a "full" clinical load, would you be willing to help subsidize the research endeavors of a fellow surgeon (with a less than "full" clinical load) in your department (i.e., accept a lower salary to help support a research salary or fund their research)?
- Y      N
38. The AAOS and OREF provide information and programs to support the research efforts and careers of orthopaedic surgeons interested in research; with this in mind, please select Yes or No to the following questions:
- |    |   |   |  |
|----|---|---|--|
| A. | Y | N | Are you aware of the existence of the AAOS Clinician-Scientist Program Committee?  |
| B. | Y | N | Are you aware of any of the 10 priorities and strategies as put forth by the AAOS Clinician-Scientist Program Committee?   |
| C. | Y | N | Are you aware of the AAOS/OREF Clinician-Scientist time line and resources available on the web?   |
| D. | Y | N | Have you utilized any of the resources provided by the AAOS/OREF that support research activities (i.e., grants, web resources, development programs, mentoring, fellowships)? |
39. (Optional) In the space below, please elaborate on any issue that you feel is important to improving research in orthopaedic surgery; please feel free to continue on the back of this sheet.