Society for Pediatric Research Presidential Address 1986¹ A Matter of Destiny

LAURENCE A. BOXER

Pediatric Hematology, University of Michigan Hospital, Ann Arbor, Michigan 48109

By time honored tradition, it has been the privilege of the presidents of professional societies to have free choice as to the subject matter of their farewell address. In considering my role as president of your society, and trying to develop a statement that would be enlightening as well as personal, I decided to emphasize the demographics, accomplishments, and goals of our Society as developed over the past few years and as reflected in the thoughts of our membership.

Our society began as the Eastern Society for Pediatric Research, and held its first meeting on March 23, 1929. By its very nature as a research society, the Society of Pediatric Research was developed to foster pediatric investigation and to provide opportunity for younger men to present their work. Although women were accepted as active members as early as the 1930s, it was not until 1974 that the official statement of the Society's purpose was changed to include younger investigators of both sexes. In its 50 yr, the Society has outgrown its provincial limits and moved beyond the banks of the Charles River. In 1932, the Society's name was changed to the Society for Pediatric Research. Today, we have increased in numbers from the original 25 male general pediatrician members to a current active membership of 589, of which 20% are women. We are located in 40 states and Canada (Fig. 1). A variety of subspecialty disciplines is represented within the Society where 17% of our membership are neonatologists.

We of the present generation of clinical pediatric investigators are aware of the multitude of challenges impacting our academic careers including limitations in funding, the need for protected research time, and legislative initiatives affecting fetal and animal research. We have heard warning that the problems facing the clinical investigator may become worse, and we have seen some of these predictions come true. We have seen clinical investigation become less attractive as a career choice for our best students. To assess the effect that these recent changes have had on our generation of pediatric investigators, active members of the Society of Pediatric Research were polled by a questionnaire developed by me and Dr. Wayne Davis of the Department of Postgraduate Medicine, the University of Michigan. This questionnaire was modified from one originally developed by Dr. William N. Kelley and Dr. Davis in 1979, in which Dr. Kelley surveyed members of the American Federation of Clinical Research and the American Society of Clinical Investigation (1).

The groups polled are summarized in Table 1. Kelley's original questionnaire was sent to a random sample of 381 members of the AFCR and ASCI: 37% of the AFCR and 56% of the ASCI sample responded. I mailed 555 questionnaires to all 555 active

members of the SPR from 1985, of which 61% responded (Table 1). The AFCR/ASCI groups surveyed in 1979 were older (with a mean age of 47 yr and with a range between 35–65 yr) than the corresponding membership of SPR (with a mean age of 40 years and a range between 33–45 yr). Both studies demonstrated hardworking groups putting in at least 59 h a week of hard work (mean $\pm$ SD, 60 $\pm$ 13 h/wk for ASCI members in 1979 and 59 $\pm$ 11 h/wk for current SPR members). The work week exceeded that level more than one-third the time (16 $\pm$ 13 wk/yr for 1979 ASCI members and 23 $\pm$ 16 wk/yr for current SPR members). Both the pediatrician and the internist were able to protect a substantial percent of time for research (Table 2). Pediatricians were much more involved in patient care than the internists. The time devoted to teaching and administration was comparable for both pediatricians and internists.

The greatest satisfaction for members of our Society comes from research, but respondents also enjoy patient care and teaching (Fig. 2). On the other hand, we tolerate administration. Overall, we are quite pleased with our lives. These findings are quite analogous to those obtained from members of the ASCI in the 1979 survey. Most members are quite satisfied with their current positions, although they considered other options such as moving to a chair of Pediatrics, more administration, or a

Fig. 1. Distribution of active SPR membership geographically.

Table 1. Groups polled

Group/yr	Mailed	Received	% Response	Censored	Total analyzed
ASCI/1979	381	213	56	11	202
AFCR/1979	381	142	37	8	134
SPR/1985	555	337	61	14*	323

* Ph.D.s eliminated.

Reprint requests Laurence A. Boxer, 6515 Mott Hospital, Pediatric Hematology, University of Michigan Hospital, Ann Arbor, MI 48109.

¹ Presented May 1986, Washington, D.C.

Table 2. Allocation of time

Group/yr	Research (%)	Patient care (%)	Teaching (%)	Administration (%)	Other (%)
ASCI/1979	45	16	17	21	2
SPR/1985	38	39	15	16	1

Fig. 2. Relative satisfaction of active membership with their work.

Fig. 3. Career options considered by active membership.

lateral move (Fig. 3). The most desired option was to consider a move that would provide more research time.

Since 90% of our membership are married, it is gratifying to note that marriage and family have a positive effect on professional satisfaction, and respondents believe that their professional positions have a favorable effect on their spouses and families. These findings also are similar to those derived from AFRC and ASCI members (Fig. 4). One reason for the positive impact of marriage on the success of the membership may be the fact that 58% of the membership are married to spouses with graduate school degrees; 30% of spouses had a masters degree, 10% a Ph.D. degree, and 18% an M.D. degree.

A factor in the faculty recruitment and retention problem is the perceived disparity in income between academic physicians and private practitioners. While, historically, academic physicians have earned significantly less than their counterpart in practice, growth of practice plans and faculty fringe benefit packages appear to have narrowed the gap considerably (Table 3). Income comparisons are fraught with difficulty, resting heavily on the adequacy of the samples compared. These data combine data from the AAMC faculty salary survey, the questionnaire to the membership, and an annual survey of physician incomes published in Medical Economics. The sample is limited

Fig. 4. The effect of professional or marital satisfaction and vice versa.

Table 3. Median income (in thousands) of academic and private practice pediatricians*

Assistant Professor	Associate Professor†	Professor†	Weighted Mean	Practicing Member	M.D.
63.0	79.3	96.8	76.8	78.6	76.4

* Medical Economics Continuing Survey, September 1985 (see text for adjustments).

† Report on Medical School Faculty Salaries, 1984-85, AAMC, January 1985.

Fig. 5. Active membership research support for 1985. The percent distribution of membership along professorial ranks is indicated in the parentheses.

to ranks of assistant professor, associate professor, and professor. For a valid comparison, two adjustments to the compensation of academic physicians were made. The first incremented the total compensation shown in the AAMC survey by 20% to account for faculty fringe benefits, whereas practicing physicians provide for these benefits from their generated income. A second adjustment reduced the compensation of academic physicians by a prorated inflation factor of 2.8% to account for the 1 yr time lag between surveys. It is clear that academic pediatricians are compensated on the average as well as their counterparts in private practice. What effect if any this will have in the future in drawing young physicians into academic pediatrics remains to be seen.

Productivity as measured by grant support is highest at the professional level (Fig. 5). Of particular interest is the observation that the foundations appear to account for a considerable amount of support for assistant professors. Such foundation support probably enables the younger members of our faculty to launch a research career, and then subsequently be competitive to obtain NIH money. Pediatricians are able competitors for NIH support (Fig. 6). When pediatricians were compared to internists for NIH-RO1 research grant support the mean funding in internists' grants was decreasing from 1983 to 1985 whereas the research dollars funded in pediatricians' grants was increasing.

Most of us given an opportunity to reconsider and knowing what we know now would take our current jobs again: 61% definitely and 31% probably. I conclude from this study that we

Fig. 6. NIH individual RO1 research support in millions of dollars comparing members of departments of pediatrics with members of department of medicine in 1983 and 1985. The numbers above the bars represent numbers of RO1 grants.

clinical pediatric investigators are a hardworking, generally satisfied group who concentrates on research, teaching, and patient care.

However, problems do exist. Half of us chose our academic pediatric career during residency (Fig. 7), and it is unfortunate that we are not influencing medical students to consider a career in academic pediatrics. Opportunities now abound in many facets of genetics, immunology, and neurobiology as they relate to pediatrics. Why is there a need to do a better job of influencing medical students to enter academic pediatrics? Because, as Kelley's AFCR/ASCR study showed, those who were most successful in achieving research funding and publishing were those who made an early choice as medical students for an academic career as compared to those who chose academics later in training (2). Thus it behooves us as academic pediatricians to encourage medical students to work in the laboratory to organize pediatric research days where members of our faculties present their research to medical students and to residents and to have periodic conferences, perhaps at morning report or other times when medical students as well as residents are present, where the members of the faculty can present their discoveries and accomplishments. Not only will we influence medical students, but we will do a better job of educating residents as to the potential opportunities in academic pediatrics.

Despite a general satisfaction, there are areas that the membership perceived as deficiencies during their training (Fig. 8). Almost half of the membership believed that they were ill-prepared for a subsequent administrative role. Almost a third believed a deficiency in basic science knowledge, in certain research skills such as grant writing, in statistics, and in contemporary biological techniques encompassing the field of molecular biology. How should we address these deficiencies? One of our major problems has been the lack of a structured fellowship program. There is a need for more formalized training in biostatistics and biomedical methodology, and finally, grant writing as part of our fellowship programs. Such training might be structured at the beginning of a research fellowship and might also provide an opportunity for current investigators to remain aware of new biomedical approaches emerging in the rapidly changing scientific world.

Research has become increasingly sophisticated increasing the need for cooperation and collaboration. It is essential in the academic setting that faculty interact significantly with people in other disciplines and hear about exciting and stimulating work in other areas which may engender new ideas and lead to collective ventures. It is surprising how often individuals focused in one narrow area of research may be partially or totally unaware of complementary activities taking place elsewhere even in their

Fig. 7. Age at which pediatrics was chosen as a career.

Fig. 8. Percent of active membership expressing perceived deficiencies in fellowship training.

Table 4. SPR membership*

Group	Belonging to group
AFCR	40
ASCI	13
Academy of Pediatrics	66
FASEB	37
NIH Study Section	40
Editorial Board	31

* The percent of SPR members belonging to an NIH study section either represents those serving as permanent members or those having served at least once as an *ad hoc* member.

own department or institution. This tendency also is reflected in the focus of our membership at these meetings toward their subspecialty sessions. We must continue to emphasize broad participation in plenary sessions and presentation there of the most outstanding scientific developments.

To foster broader communication, the Society has initiated joint sessions with the members of AFCR and ASCI, to which a substantial number of our membership belong (Table 4). We are active participants in the Academy of Pediatrics, FASEB, NIH Study Sections, and Editorial Boards. Thus, we have organized the meeting this year around themed plenary sessions to foster communication among the subspecialists who have an interest in many aspects of the basic sciences as they impact on clinical medicine. And finally, we have selected subspecialty papers from the general area of neonatology to encourage communication between the neonatologists and the subspecialists.

Recognizing several years ago that societal and legislative

pressures have begun to have a negative effect on clinical investigation, the members of the SPR, APS, AMSPEDEC, and Ambulatory Pediatric Association, became involved directly in the political process. We joined hands with the Council on Government Affairs of the Academy of Pediatrics in order to provide a larger collective pediatric voice to the Congress. We clinical investigators have a responsibility as a profession and as pediatricians to speak to our congressional representatives with a unified, consistent, and credible voice. Appropriate organizational structure and strong leadership are important to coordinate and articulate the complex issues affecting us. The SPR, APS, and AMSPEDEC have worked with the AAMC in an effective manner on many issues. Our societies owe special thanks to Dr. Myron Genel for leading and coordinating these legislative initiatives. However, we realize that the order of priorities established by the AAMC must be determined by the multiple constituencies for which that group takes responsibility. Once again, it is imperative that we maintain the collective voice within pediatrics through the Public Policy Council so that we can continue to develop and pursue aggressive, positive approaches that will help ensure adequate funding for clinical research.

It is imperative that as SPR members, we furnish legislators and their staff members with the information they need to support a program of further research and training. Not only do we have to defend NIH budgets, but in a broader sense, we must protect the needs of our charges, the children of this country.

Hand-in-hand with the members of the Academy of Pediatrics, we must be involved in encouraging legislation to reform the tort system in regard to vaccines risks and complications in order to provide an environment in which vaccines will continue to be produced by industry. Additionally we try to guarantee that insurance will be available to ensure that children will receive prophylactic treatment and immunization as needed.

Certainly, our Society has changed in the more than 50 yr of its existence. It continues to provide a forum for the exchange of ideas and promotion of friendship among its members. Recently it has begun to recognize the creativity of young investigators through the provision of Starter Grants and awards for Young Investigators. As we look to the future, important guiding principles of our Society should be to provide opportunities for sharing research ideas and accomplishments; to foster a climate of funding stability; and to provide appropriate rewards for promising clinical pediatric investigators. This philosophy recognizes that destiny is not a matter of fate; destiny becomes a matter of choice. Destiny is not a matter of waiting, it is a matter of achievement.

REFERENCES

1. Kelley W 1980 A positive approach: things could be even better. *Clin Res* 28:267-270
2. Davis WK, Kelley WW 1982 Factors influencing decision to enter careers in clinical investigation. *J Med Educ* 57:275-281