

# Research Policies and Practices in Family Practice Residencies

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A questionnaire survey of all US family practice residency programs was undertaken to gather information pertaining to the policies and practices of resident research projects. Eighty-one percent of the programs responded. The majority of the programs which responded require or encourage research by their residents. Cross-tabulations of the data relate several characteristics of residency programs to their positions on resident research. University based or affiliated/administered programs, programs with fewer residents and larger faculties, and programs in which the faculty are engaged in research tend to encourage or require research by residents although these findings are not consistent. Information is also presented pertaining to financing resident research, preparing residents for conducting research, and disseminating the results of residents' projects.

The establishment of a research base has long been recognized to be a requirement for the continued growth and development of family practice. In one of the earliest commentaries discussing family practice in terms of an academic discipline, McWhinney identified "an active area of research" as an essential criterion by which a subject claims to be a discipline.<sup>1</sup> Geyman, reflecting on the stages of family practice development as an academic discipline, included an emphasis on research as an integral component in the second phase of its evolution.<sup>2</sup>

Educators in other medical disciplines have commented on resident research as a method for improving resident education.<sup>3</sup> Consideration of the issue of research by family practice residents as an educational experience has only recently begun. Kane has emphasized the importance of integrating research with quality patient care and the development of educational programs in family practice residencies, which will provide residents with the training and motivation to carry out research in their practices.<sup>4</sup> Geyman has presented several specific approaches for encouraging research in family practice residencies.<sup>5</sup> He main-

tains that family practice residents cannot be compelled to pursue research, but that research by residents can be facilitated by the building up of an environment where research is valued and encouraged and where necessary resources for conducting research are provided.

Several recent articles have discussed research in family practice in general terms.<sup>6-10</sup> Other papers have presented strategies by which specific components of the research process can be taught in family practice residencies.<sup>11-16</sup> While the need and objectives for family practice resident research, as well as content areas and methods for teaching research to family practice residents, have been discussed, there have been no published studies on the actual extent of research conducted by residents during their residencies. This survey was undertaken to gather information about resident research with the purpose of providing information useful to family practice educators and others who might be interested in the current state of affairs in this area. The following questions seemed to be relevant to a survey of this nature:

1. What is the stated position on resident research formulated by family practice residency programs?

2. What are the characteristics of family practice residencies—in terms of type of program, age

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**Table 1. Distribution of Family Practice Residency Programs by Questionnaire Mailing and Response**

Program Structure	Questionnaire Mailed		Questionnaire Returned	
	N	(%)	N	(%)
Community based	63	(18.1)	46	(16.4)
Community based— University affiliated	165	(47.4)	142	(50.5)
Community based— University administered	46	(13.2)	37	(13.2)
University based	58	(16.7)	41	(14.6)
Military	16	(4.6)	15	(5.3)
<b>Total</b>	<b>348</b>	<b>(100.0%)</b>	<b>281</b>	<b>(100.0%)</b>

**Table 2. Residency Program Position on Research as Component of Resident Education**

Position	N	(%)
Not Addressed— No Plans to Change	5	(1.8)
Not Addressed at Present— Plan to Consider in Future	53	(18.9)
Resident Research Projects Encouraged	181	(64.4)
Resident Research Projects Required	42	(14.9)
<b>Total</b>	<b>281</b>	<b>(100.0%)</b>

of program, size, and number of faculty—where research is being conducted by family practice residents?

3. What resources are provided to residents to enable them to conduct research?

4. How are research projects by residents evaluated?

5. What happens to the results of research projects carried out by family practice residents?

## Methods

A two-part questionnaire was developed for data collection. The first part of the questionnaire was designed to gather demographic information on each residency program (eg, size of residency program, type of research program, and extent of faculty involvement in research activities). The second part of the questionnaire was designed to gather specific information from those residency programs which had resident research programs underway at the time the questionnaire was completed.

For purposes of completing the questionnaire, research was defined as "an objective systematic

process in which scientific research methods and techniques are used to identify solutions to a problem that has been formulated...covering any organized activity from surveys to traditional clinical trials." The definition did not include activities such as writing up a case study or conducting a routine medical record audit although those activities could be a method of data collection within a research project.

The questionnaires were mailed to the directors of all accredited family practice residency programs (N=348) listed with the American Academy of Family Physicians as of June 1978. A follow-up mailing to all nonrespondents was carried out four weeks after the initial mailing.

## Results

Questionnaires were returned by 281 program directors for a response rate of 80.7 percent. Responses from the first mailing (N=214 or 76.2 percent, were compared with those resulting from the follow-up mailing (N=67 or 23.8 percent) to identify any significant differences in the two categories of respondents. No significant differ-

<b>Table 3. Reasons for Not Requiring or Encouraging Resident Research Projects*</b> N=58	
<b>Reason</b>	<b>Number of Programs (%)</b>
Too Few Faculty	30 (51.7)
Faculty Inexperienced	27 (46.5)
Insufficient Financial Resources	27 (46.5)
Residents Not Interested	15 (25.8)
Program Too New	10 (17.2)
Research Not Necessary in Residency	7 (12.0)
Other†	11 (18.9)

\*Percentages do not total 100 percent as programs could indicate more than one reason  
†Other reasons included insufficient faculty time or interest; other priorities in the residency program; insufficient medical records or computer support systems

ences were noted and all responses were pooled for subsequent analyses.

Table 1 compares the distribution of the types of programs in the survey population with those programs that returned questionnaires. As shown, the distribution of types of programs returning questionnaires is nearly identical to the population distribution.

As displayed in Table 2, the majority of respondents (N=181 or 64.4 percent) encourage resident research projects; an additional 42 programs (14.9 percent) require a resident research project for completion of the residency requirements. While slightly over 20 percent of the respondents do not currently address the topic of resident research, nearly all of them plan to do so in the future.

Several cross-tabulations were performed in an attempt to identify characteristics of the residency programs and their positions on resident research projects. When structure of the residency program is examined in terms of the program position on resident research projects, the largest cluster of programs encouraging or requiring resident research projects are university based or affiliated/administered. This relationship is not consistent, however, as over two thirds of the responding community based programs endorse resident research projects. Six university programs did not address the topic of resident research projects at the time the questionnaires were returned.

No distinct trends were apparent when the programs' positions on resident research were exam-

ined according to age of the program. With 1974 as the arbitrarily selected mid-point of the decade 1969-1978, programs requiring resident research projects were evenly distributed between the five-year time periods.

There did appear to be a slight trend when the position on research as a function of residency program size was examined. Relating the number of faculty in the program to the number of residents, the data revealed a slight tendency for programs with fewer residents (18 or less) and a larger faculty (4 or more) to be more likely to encourage or require resident research projects.

The relationship of faculty involvement in research activities to program position on resident research was also examined. As might be expected, there is a trend toward faculty involvement in research and similar expectations for the residents in the program. However, this relationship is not as consistent as might be predicted. Eleven programs, or 25 percent of those programs requiring resident research projects, do not have faculty actively engaged in research activities; nearly 50 percent of those programs encouraging resident research projects do not have faculty engaged in research activities.

Residency programs that do not have a formal policy of encouraging or requiring resident research projects were requested to indicate the reasons for their position. The results are presented in Table 3. The most frequently listed reasons were insufficient or inexperienced faculty or lack of adequate financial resources. Fifteen programs

(25.8 percent) stated their residents were not interested in research; seven programs (12.0 percent) felt that research is not necessary in a residency program.

Specific data were requested from the 223 programs encouraging or requiring resident research projects to identify the types of support available for the residents in their research activities. Only 30 percent of those programs indicated they provide block time for residents to work on their research projects. The responses are difficult to interpret, however, as nearly 34 percent of the respondents left the question unanswered. Of those programs that do provide block time, most indicated that the time provided is an individually arranged elective dependent on the needs of the resident.

The respondents were asked to indicate the types of training experiences provided in the residency program to prepare the residents for their research projects. Approximately 16 percent of the programs provide course work either within or outside of the program to assist the residents. Another 12 percent of the programs provide special workshops or conferences on research design and methods. Individual instruction or guidance is available to the residents in approximately 4 percent of the programs. Approximately 35 percent of the programs provide no formal training experiences for the resident research experience.

Faculty advisors are assigned to the residents in 56 percent of the programs, although this is more likely to occur in programs that require research projects. A variety of research personnel seem to be available in the programs although, as expected, many of these programs are university based or affiliated; it is not clear if these support personnel are program faculty or available through other departments of the university. Only 10 percent of the programs have research assistants available for resident research projects.

Other types of support personnel available to assist residents in their research activities include statisticians (available in 26 percent of programs requiring or encouraging research), epidemiologists (15 percent of programs), and research methodologists (13 percent of programs).

Insufficient financial resources was a major reason for residency programs not developing a formal policy on resident research projects. The major source of funding appears to derive from

existing departmental or institutional funds with 54 percent of the programs indicating that as a source. Nearly 25 percent of those programs that require a research project provide no funds to the residents for their projects. Approximately 18 percent of the programs have obtained special grant funding to support research activities. Other sources of funding listed by programs included drug companies, philanthropy, and state academies.

Data concerning the criteria employed by programs for the acceptance of research projects indicate approximately 30 percent of the programs require significance of the research to clinical medicine or primary care. This may indicate that the resident research experience is viewed as an educational experience rather than a contribution to the body on clinical knowledge relevant to family medicine. Further reinforcing this idea is the finding that only 12 percent of the programs expect a completed project of publishable quality.

The distribution of responses in terms of dissemination of the research results are contained in Table 4. Approximately 48 percent of the programs expect resident presentations of their research results to program peers and faculty. Surprisingly, only 14 percent of the programs expect dissemination of the research results beyond their program. A few programs indicated that research projects are published in special issues of state medical journals or program monographs.

## Discussion

The relatively large number of programs (15 percent of the respondents) which require a resident research project was unexpected. This number, combined with the number of programs which encourage resident research, indicates that the emphasis in the literature on the importance of research experiences in family practice seems to have been absorbed by the majority of residencies. Many training programs appear to recognize the need for research and are responding to the challenge.

Programs that require or encourage resident research are still difficult to characterize and to distinguish from those which do not. The differences may have more to do with the educational philosophy of the program, either expressed or implied, than with other characteristics which one might expect to be related to research activities, such as

Table 4. Distribution of Results of Completed Resident Research Projects* N=223		
Distribution	Position on Research	
	Resident Research Encouraged (n <sub>1</sub> =181)	Resident Research Required (n <sub>2</sub> =42)
	N (%)	N (%)
Formal write-up submitted to faculty	62 (34.3)	29 (69.0)
Residents publicly present their completed projects to peers and faculty	73 (40.3)	33 (78.5)
Dissemination of results beyond local program	27 (14.9)	5 (11.9)
No planned or required follow-up	14 (7.7)	3 (7.1)
Other†	21 (11.6)	8 (19.0)
*Percentages do not total 100 percent as programs could indicate more than one type of distribution †Other responses included publication in special issues of journals or monographs; publication encouraged; no plans as yet for distribution of results		

the size of the faculty, the number of residents, the age of the program, or faculty activity in research.

The real purpose for a program to emphasize research by residents is still unclear. The data would seem to indicate that a research experience for family practice residents is best viewed as an educational experience rather than a research experience in the traditional sense. This interpretation would seem to be supported by noting that few programs have established as a criterion that the residents' research projects must be of significance to family practice/primary care (ie, they do not seem to stress the importance of adding to the body of knowledge).

The lack of financial resources is often given as a reason for not undertaking research. However, this may qualify as a feeble excuse when it is realized that many programs engage in research activities with little or no funds outside of the usual departmental resources.

The creation of fellowship programs and other faculty development programs may alleviate the problem of lack of faculty experienced in research. Perhaps, also, this will furnish significant role models for residents and provide a further boost to research in family practice residency programs.

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