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A Required Resident Project in a Family Medicine Program

SUMMARY

The authors describe the resident-project component of the Family Practice Residency program at the University of Toronto. The goals of the project are to allow the residents an experience of critical appraisal, writing for a medical forum, and presenting in a style acceptable to the medical community. Over 305 projects have been completed, and 100% of the residents complete projects at this time. An analysis of the types of projects, the topics covered, and the effect on the residency program is presented. An appendix lists projects that have been published.(*Can Fam Physician* 1989: 35:891–894.)

SOMMAIRE

Les auteurs décrivent la composante «projets des résidents» du programme de résidence en médecine familiale de l'Université de Toronto. Ces projets visent à exposer les résidents à l'évaluation critique et à la rédaction d'un texte pour diffusion médicale présenté dans un style acceptable par la communauté médicale. Actuellement, 305 projets ont été complétés et 100% des résidents réalisent leur projet. L'article analyse les types de projets, les thèmes couverts et leur influence sur le programme de résidence. Vous trouverez en annexe la liste des projets publiés.

Key words: residency training program, family medicine training, research projects

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FAMILY MEDICINE, as a new specialty, has had to concentrate on developing educational, administrative, and service components of programs. Only in recent years have departments begun to spend more time on the academic expansion of the base of family medicine.[1,2] Residents, the future practitioners and teachers of medicine, need to begin, during their training, to learn the rigour and to practise the skills needed for the further development of the academic discipline. Several strategies have been used to increase academic activities among both faculty and residents.[3,4] One method is to have residents complete an academic/research project as a component of their training.[5] Although several training programs include residents' projects, few make this component compulsory. Residents' projects have been a required component of the residency program of the Department of Family and Community Medicine, University of Toronto, for the last eight years. This paper describes our experience with this program.

The Setting

The Faculty of Medicine of the University of Toronto is one of the largest medical schools in North America, with over 1000 medical undergraduates and over 1700 postgraduate trainees. The Department of Family and Community medicine is comprised of eight divisions in major teaching hospitals, five community health centres, and over 45 community teaching practices. The department has over 80 full-time faculty members. It assigns a four-week ambulatory block for all the fourth-year medical students; it organizes, administers, and does much of the teaching in the interviewing-skills training of the medical students and is a major contributor to the introduction to clinical medicine course (history-taking and physical examination instruction). The department is responsible for the two-year family practice residency program, which has over 130 residents. There are several third-year positions available for trainees who plan to practice in remote areas, or who wish further training in specific areas, such as obstetrics, or in academic activities. The department also runs an Emergency Medicine program leading to eligibility for certification in Emergency Medicine.

The department was created in 1969, and has designed, developed, organized, and delivered these programs: a considerable effort. As part of the training of future family physicians the department has, since 1980, required each resident to complete a project before he or she will be considered eligible to write the Certification examinations for the College of Family Physicians of Canada.

Objectives

The objectives of the resident-project program are threefold. These

objectives were developed to allow the resident:

- to learn how to make a critical appraisal of the medical literature and, when appropriate, to plan and/or conduct a research project;
- to learn to write up a review or project in a format appropriate to the medical literature; and
- to present findings at a symposium on medical advances.

The Resident Projects

When, in 1980, the department instituted the resident-project program it was decided that participation would be voluntary for the following two years. There were two reasons for this decision. First, residents who would complete the program in that two-year period had been accepted into the program when the new requirement for a project did not exist. Secondly, the two-year period would allow staff the opportunity to integrate the new program into their units. Residents who applied to the program after 1980 were informed that a project would be required, and since 1983, except in exceptional circumstances, all residents who have been allowed to sit the Certification examination have completed a project. Residents have not been given time away from their clinical program to work on their project.

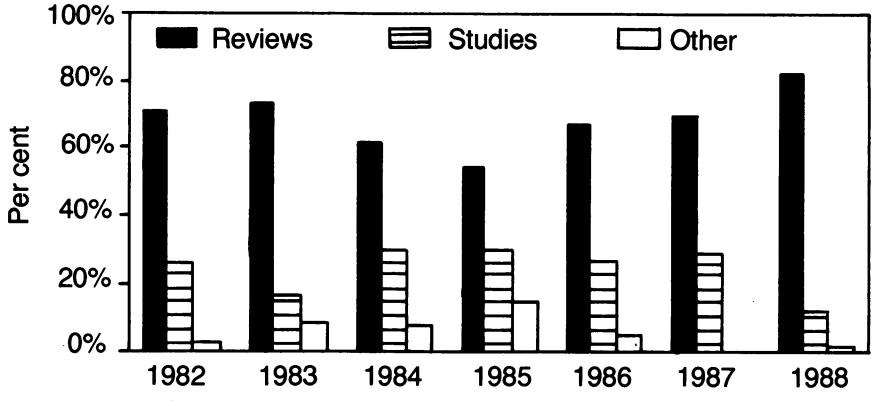
During the two years prior to full implementation of the project program, a project manual was written for the use of the residents and the staff. The manual outlined the objectives of the program, the requirements for both written and oral reports, the method of grading the projects, and the actual types of projects that would be acceptable. The manual specifically stated that a research project was *not* required. It pointed out that the project could be a detailed summary of an aspect of family practice, including critical appraisal of the appropriate literature, the development of a physician or patient handbook or package, the development of an audio-visual presentation, or a research project.

During the initial two years, the Faculty Development Committee undertook a project to ensure that there was a sufficient number of faculty with critical appraisal skills. Several teachers were sent to McMaster to learn the techniques of critical appraisal, and they then taught other members of staff. The Faculty Development Committee also made an inventory of the skills of the staff so that suitable supervisors could be identified.

The program is now eight years old and has been a success. Each resident has a faculty supervisor to monitor and assist in his/her project. Some residents have planned a research project and conducted pilot testing, and occasionally residents have had the time to complete a research endeavour. Each project (except for audio-visual presentations) must be written up in the format required for submission to a journal (i.e., there must be a bibliography, discussion, and conclusions). Written comments on the submission are sent back to the resident. Each of the hospitals conducts a project day, during which each of their residents presents his/her project. Again, the residents receive written feedback on their submission. The winners at each hospital then present to all residents from all hospitals and to the faculty. A panel of judges, including community physicians, experts from other departments of the faculty, and representatives of other family-medicine departments judge the competition. The winner is assisted to attend and present his/her paper at the Annual Scientific Assembly of the Ontario Chapter of the College of Family Physicians of Canada or at another appropriate scientific meeting (the Michigan Research Day, the Research Day of the University of Western Ontario, or NAPCRG).

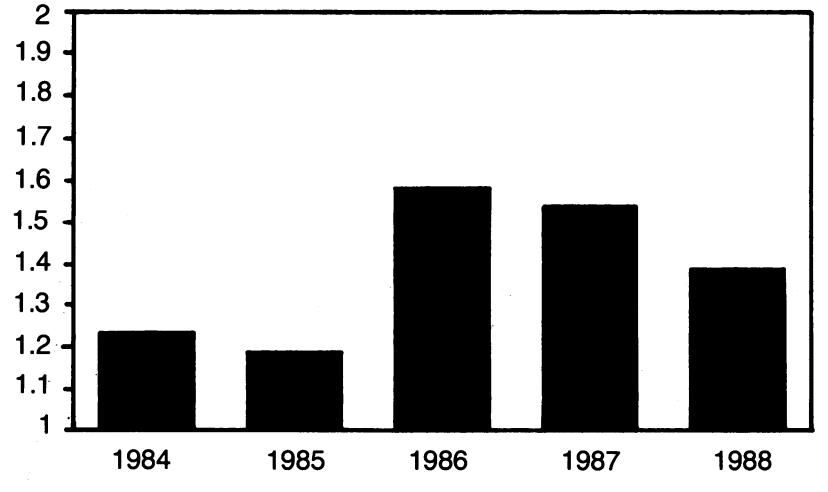
One additional goal has been established for the program. Specifically, each resident is encouraged to undertake an on-line literature search in collaboration with an experienced staff member.

Figure 1
Types of Resident Projects



Note: Expressed as percentage of projects done.

Figure 2
Residents per Project



Outcome

Over the past eight years, 305 written projects have been completed. Six or more audio-visual projects have also been finished. The projects have included detailed case reports (Lefkowitz J. Quinine-induced thrombocytopenia: a case report and review of the literature. 1985); handbooks for physicians (Pyper S. Assessment of speech-language disorders: a manual for the family physician. 1988); handbooks for patients (Loeb G., Everything you ever wanted to know about your baby but were afraid to ask. 1983); audiovisual presentations (Drake, D. I ain't afraid of my doctor. 1988); detailed research proposals (Woods N. A proposal for the withdrawal of digoxin in outpatients attending a family practice unit: a double blind controlled study. 1987); clinic audits (Grbac L. Determinants of influenza vaccination: the physician's prejudice? 1987); and a small number (6–12 per year) of completed research projects (Masson S. Clinical comparison of two phasic oral contraceptives. 1988). These reports occupy a large section of the departmental library. Over the years a number of the projects have led to published papers. The nine published papers that we are aware of are listed in the Appendix.

Figure 1 shows how the percentage of completed projects consisting of reviews, true studies, and other types has changed over the years. Between 55% (1985) and 85% (1988) of the projects have been literature reviews with critical appraisal. Clearly, our residents find that literature reviews are for the most part, the project of choice. Many of these reviews are very extensive. To cite one example, a resident decided to review the investigation of newly reported Raynaud's phenomena in the primary care setting (Rapaport-Glick S. A family physician's approach to Raynaud's syndrome: diagnosis and management. 1983). At the time no articles had been published that discussed the problem in a family-practice population. All existing references (over 100) reviewed by the resident were written by specialists and dealt with referred patients. The resident critically appraised the literature and came up with a suggested plan for family doctors. This review was published in *Modern Medicine* as a general review for family physicians.

The percentage of true studies has varied from 30% (1984 and 1985) to 13% in 1988. These have included surveys of residents, patients, and physicians; descriptive studies; case-controlled studies; and intervention studies.

The program has encouraged residents to work together on projects. Figure 2 shows how the number of residents per project has varied over the years.

The topics that the residents choose for their projects vary considerably. Table 1 lists the content areas for the 90 written projects completed in 1987 and 1988. Figure 3 presents the same data in the form of a graph.

Discussion and Conclusions

In the development of family medicine as a discipline, it is essential that training programs equip future practitioners with tools that will enable them to question, appraise, and challenge existing knowledge. Some of our trainees will expand our discipline through research, and these individuals need an opportunity to develop appropriate skills during their training. The resident-project program that we have developed will enable us to meet both of these challenges. In the short run, the required monitoring, assisting, supervising, and evaluating forces the staff to engage in staff development so that they can assist their trainees and maintain their credibility.

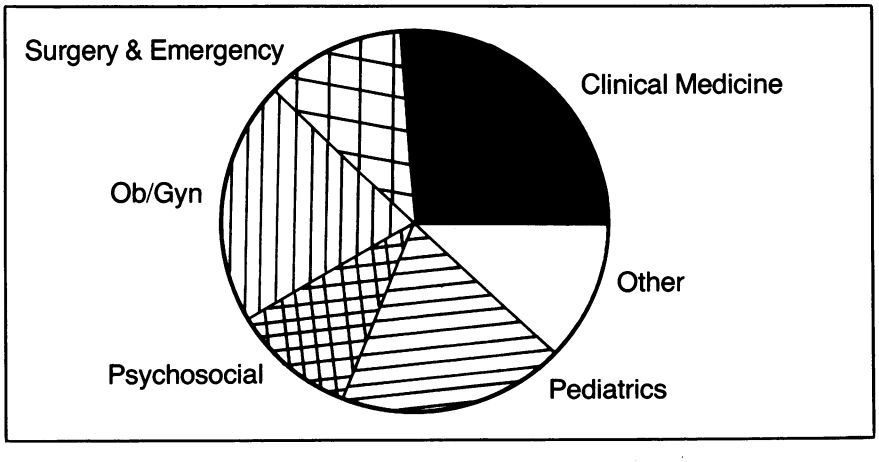
It must be acknowledged, however, that this program is highly labour intensive. A great deal of time and manpower is required to supervise, review, and give the necessary feedback to the residents. Whether this time could be spent more effectively in other pursuits is not clear. Should this activity be a high priority for an academic department? Each group will have to consider this question for itself.

Our assessment follows. The compulsory requirement for the completion and writing up of a project from

Table 1
Topics of Projects, 1987 & 1988

Topic	Number of Projects	Percentage
Pediatrics	14	16
Alternative medicine	3	3
Social issues	6	7
Adult clinical topics	16	20
Geriatric topics	6	7
Obstetrics	11	14
Emerg/sport/ortho	9	10
Gynecology	10	11
Counselling/psych	3	3
Other	10	11
Total	**90**	**100%**

Figure 3
Topics of Projects, 1987 & 1988



each resident has been a fruitful endeavour for the Department of Family and Community Medicine, University of Toronto, in spite of the time and effort required to support the undertaking. The product from the residents has been impressive and has led both to contributions to the literature and to the stimulation of more academic activity in the faculty of the department. It has been worth the effort! ■

Appendix: Publications Resulting from Resident Projects

Beaver J, Hilditch JR. Screening for hypertension in family practice. *Can Med Assoc J* 1986; 32:1117–21.

Gray GL, Ellison PA, Shafir MS. Endometrial carcinoma: feasibility of case-finding in a family physician's office. *Can Med Assoc J* 1988; 138:125–8.

Grbac L. Determinants of influenza vaccination: the physician's prejudice? *Can Fam Physician* 1988; 34:2637–9.

Herman D. Day-care centres: risks and prevention of infection. *Can Fam Physician* 1988; 34:1191–5.

Latowsky ML. Age related macular degeneration: what can a family physician do? *Can Med Assoc J.* 1988; 139:1053–8.

Novak T. Role of deputizing agencies in the delivery of primary health care services. *Can Med Assoc J* 1983; 128:1079–82.

Rapaport-Glick S. Family physician's approach to Raynaud's syndrome. *Mod Med (Can)* 1984; 39(6):667–71.

Rudner H. Stress and coping mechanisms in a group of family practice residents. *J Med Educ* 1985; 60:564–671.

Shah CP, Kyle RJ. Diabetes mellitus among Canadian Indian women delivering heavy-for-date newborns. *Can Fam Physician* 1988; 34:1529–31.

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