ORIGINAL

Guidelines for Planning Family Medicine Residencies

By Vincent R. Hunt*

INTRODUCTION

During the past decade family medicine has experienced a remarkable resurgence in many countries, including the Middle East.[1] [13] Bahrain and the American University of Beirut started residencies in 1979 and neighbouring Arab states may develop similar programs. Thus it is likely that physicians and health planners in this geographical area will be interested in methods of training family physicians. These methods vary throughout the world. For instance, the approach in the United States differs in some respects from those vocational programs based on the system in Great Britain. This article delineates distinguishing features of American residencies by describing their standards and summarizing the consensus of many leading educators concerning the "essentials" of quality programs. [14—15] It also draws on various studies and commentaries pertaining to the content of family medicine. [16—25] These suggestions regarding curriculum have been received favourably by physicians responsible for teaching residents in the United States, Bahrain, Lebanon and Korea. The author has found that these guidelines help explain concepts of family medicine. At the same time they show how these abstract ideas can be implemented in a practical manner. Information is presented in a format intended to facilitate selection of those aspects which are judged most appropriate to the needs of developing programs.

* Co-ordinator,
Family Practice Residency Program,
Ministry of Health,
Bahrain

Adjunct Professor,
Faculty of Health Sciences
American University of Beirut

Director,
Department of Family Medicine
St. Paul-Ramsey Medical Centre
St. Paul, Minnesota, U.S.A.

Associate Professor,
Department of Family Practice and Community Health
University of Minnesota
Minneapolis, Minnesota, U.S.A.

FOUNDATION OF CURRICULUM CONTENT

The directors of the American Academy of Family Physicians and the American Board of Family Practice have adopted the following definition of family practice : "Family practice is comprehensive medical care with particular emphasis on the family unit, in which the physician's continuing responsibility for health care is not limited by the patient's age or sex nor by a particular organ system or disease entity. Family practice is the speciality in breadth which builds upon a core of knowledge derived from other disciplines — drawing most heavily on internal medicine, pediatrics, obstetrics and gynecology, surgery and psychiatry — and which establishes a cohesive unit combining the behavioral sciences with the traditional biological and clinical sciences. The core of knowledge encompassed by the discipline of family practice prepares the family physician for a unique role in patient management, problem solving, counselling and as a personal physician who co-ordinates total health care delivery."

These principles provide the foundation upon which to build a strong residency program with high standards equivalent to other specialities. A well constructed curriculum will incorporate basic educational experiences applicable to all societies. In addition, as emphasized by an expert committee of the World Health Organization, postgraduate preparation for the family physician should be designed to meet the special health care needs of the countries in which the programs are being developed.[7]

MODEL FAMILY MEDICINE CENTRE

In order to minimize fragmentation created by specialty rotations,

residents provide ongoing care to ambulatory patients in teaching health centres throughout all three years of their training. These are the settings in which the essential aspects of family medicine are demonstrated daily. Residents learn continuity by maintaining an ongoing personal relationship with their patients under the supervision of their teachers. Instead of limited episodic care, a comprehensive approach is taught. This approach incorporates skills derived from a wide variety of disciplines including the traditional specialties, behavioral science, and public health.

Residents are expected to spend a minimum of one half day per week in health centres during their first year, two to four half days during their second year and approximately five to six half days during their third year. At least one member of the family medicine faculty should be available at all times to supervise and advise residents.

Whenever possible teaching health centres should be separated from hospitals. This helps assure autonomy and an environment which is similar to the resident's practice location following graduation. Another helpful guideline is that a program of twelve residents will require a total space allocation of approximately 3600 square feet which may be provided in one or several health centres. This includes at least six examining rooms in order for residents to care for patients and for tutors to teach within these rooms without disrupting efficiency. The following functional areas are also included in those health centres designed for training residents:

Space for a conference room

Work areas for residents

Staff offices

Library and resource centre

Basic laboratory adequate for urinalysis, stool examination, throat cultures, etc.

Area to review x-rays

Counciling room large enough to accommodate families.

There should be sufficient room so that patient records can be maintained within the family medicine centre. This facilitates prompt retrieval of information, patient care audits and chart reviews.

Video cameras or one-way mirrors are often provided in some of these examining rooms so that resident-patient interactions can be observed.

The community health centres in Bahrain and many other Arab countries are ideally suited for residency training units. It is important, however, that they be identified by patients and physicians as comprehensive health centres orientated to the principles of family medicine rather than episodic or fragmented care.

TIME FRAMES FOR SPECIALTY EXPERIENCES

Table 1 lists the specialties which are particularly important to family medicine and the periods usually set aside for training in these disciplines. Although residencies differ in the amount of time spent on each specialty rotation, most programs fall within the range indicated.

Table 2 represents a graphic outline of a sample curriculum which results in the following time allocations over a three year period : family medicine centre, 40 per cent; inpatient hospital services, 40 per cent; and outpatient ambulatory care specialty service, 20 per cent.

A subsequent article will show how this has been modified to the needs of the residency in Bahrain with greater emphasis on ambulatory care, public health and community medicine and somewhat less in-hospital training.

MISCELLANEOUS EXPERIENCES

Residents are taught cardiopulmonary resuscitation and other emergency procedures. Training in local anesthesia is considered desirable for all, while those anticipating practices in remote areas are likely to require general anesthesia as well. Teaching should be offered in nutrition, physical medicine, and practice management. Experiences in urology and diagnostic radiology are strongly recommended. Structured experiences in laboratory medicine and clinical pathological correlation help round out the resident's education.

COMMUNITY MEDICINE

Community medicine is an important aspect of family medicine and should be integrated throughout the three years of residency training. This includes instruction in epidemiology, preventive medicine and environmental health. Residents should become familiar with available health resources and the functions of allied health personnel. Thus, upon graduation they will be able to evaluate the health needs of the community in which they practice and participate in constructive solutions to those problems which have been identified. Education in community medicine becomes more meaningful when residents provide care to under served populations during a portion of their training.

ELECTIVES

Electives are usually taken in the second or third years. They should be well planned experiences with clearly defined objectives.

Electives add flexibility to the program and help prepare residents for the unique circumstances associated with their anticipated practice sites. For instance, a physician planning to locate in a large city is likely to have different needs from a colleague who plans to practice in a remote rural area. Electives also provide an opportunity to remedy specific deficiencies identified during training. Some residents may consider taking electives in public health which could eventually lead to a Master of Science Degree.

WORKSHEETS

Much of the information presented in this article can be summarized in the form of worksheets. They are intended to assist those responsible for planning residencies in family medicine. Preferably, a co-ordinator should be assigned responsibility for overseeing resident education in each core specialty. This function is usually assumed by a department chairman or his designee. The approach outlined in **Table 3** helps assure selection of these co-ordinators. **Tables 4 and 5** provide a method for determining that training is offered in subjects which may not be incorporated into the block time rotation schedule but which are nevertheless of critical importance to family medicine.

GUIDELINES FOR CURRICULUM CONTENT

The objectives and plans for specialty rotations and experiences should be developed in a co-operative manner between members of the family medicine staff and representatives from the involved specialties. Co-ordinators and family medicine staff should agree on their expectations for resident education and objectives should be stated in writing before initiating the educational experience.

Whenever possible local studies of disease incidence and prevalence should be used as guides. In this way residents are more likely to receive training relevant to the needs of patients in their own country. Many objectives are appropriate anywhere, others may not be. For instance, thorough training in typhoid fever, trachoma, heat stroke and the cultural characteristics of Indians, Persians and Egyptians are all important in Bahrain but not of high priority in Minnesota, U.S.A.

The following suggestions are intended to provide a basis for negotiating curriculum content. They may be modified and expanded as necessary.

Internal Medicine : Internal medicine comprises a major component of family medicine. The relationship between these two specialties has been reviewed in a critical manner by Perkoff.[26] In order to be adequately prepared for their future practices residents must receive training in the following components of internal medicine :

1. Cardiovascular disease
2. Endocrinology
3. Pulmonary disease
4. Hematology
5. Gastroenterology
6. Infectious disease
7. Rheumatology
8. Nephrology
9. Allergy — Immunology
10. Oncology
11. Neurology

These experiences do not require separate time blocks but can be integrated into the overall rotation.

One of the most important contributions of internal medicine is in the realm of medical decision making. Residents should be shown and taught sound clinical logic based on pathophysiology, astute interpretation of laboratory tests and knowledgeable differential diagnosis.

Pediatrics : Pediatrics is also a fundamental component of family medicine.

Residents should be trained in the following areas :

1. Newborn care.
2. Neonatology, including initial support and transport of the critically ill neonate.
3. Well baby care.
4. Growth and development of the child from infancy through adolescence.
5. Nutrition.
6. Infectious disease.
7. Allergy — Immunology.
8. Behavioral and emotional problems.
9. Learning disabilities.
10. Childhood illnesses especially those which occur frequently.
11. Adolescent care.

There must be appropriate balance between training in ambulatory and inpatient pediatrics.

Surgery : In America, residents are expected to acquire the following skills :

1. Recognition and management of surgical emergencies.