Bahrain's Family Medicine Residency Program

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INTRODUCTION

Bahrain initiated the first family medicine residency in the Arabian Gulf on September 1, 1979, following several years of planning and preparation by physicians in the Ministry of Health and the American University of Beirut. It appeared to be the right time for this innovative educational endeavor envisioned by H.E. Dr. Ali Fakhro.[1] Over the preceding three decades the health status of this country had improved dramatically as vividly portrayed by Rajab and others.[2–4] Within one generation Bahrain's medical services had expanded from a rudimentary level to well staffed hospitals with modern facilities. Most major endemic diseases were either eradicated or well controlled. Maternal mortality decreased from 61.6/1000 in the early forties [2] to .6/1000 in 1980.[5] These accomplishments resulted in a new perspective on life and health for the people of Bahrain. Furthermore, strategically located health centres had been constructed throughout the state providing convenient access to all. The quality of care in these centres had also improved rapidly over the past several years as reflected in an analysis by Armenian and Yacoub[6] and a recent article by Cotter.[7] These improvements in the service aspects of health care provided a secure foundation for the Family Medicine Residency Program.

Initiation of a medical education system was a substantial undertaking, however, and the Family Practice Residency Program (F.P.R.P.) Committee** had to face many critical problems. In describing these issues, Armenian[8] stressed that, "unlike other medical specialities, a family practice residency program is highly related to the culture and system in which the discipline will be practised." He emphasized that training should be oriented to the health needs of Bahrain and concluded that a quality program represents a judicious balance of three fundamental elements :

1. A core content which relates to the basic discipline of family medicine.
2. Hospital training with rotations in the major specialties.
3. Training within family practice health centres.

Others have also reiterated the importance of basing medical training on the needs of patients in the community.[9–11] It was now necessary to convert this ideals into a practical approach which would maximize the educational resources of this country while reinforcing those aspects which were incompletely developed. The purpose of this paper is to outline the major issues involved, describe how they were met, and comment on special considerations requiring further resolution. (The concepts and principles underlying these developments have been described in greater detail elsewhere.[12–13] Hopefully, this communication will assist those who participate in the training of family medicine residents in Bahrain as well as educators in neighboring countries who are considering similar residencies.

MAJOR "GROUNDWORK" ACTIVITIES

1. **Size of Program :**
   It was determined that six residents would be accepted each year resulting in a total program of 18 trainees over a three year period. This number was thought to be appropriate for the circumstances in Bahrain. Although many more family physicians are needed, too rapid expansion is likely to overburden available teachers and educational resources. As the residency becomes established more positions may be offered.

2. **Curriculum Framework :**
   Table 1. represents an approved curriculum frame work for the Family Practice Residency Program which was developed following considerable study and extensive discussions among members of the F.P.R.P. Committee concerning the nature of family medicine, the needs of Bahrain and the goals for this residency. This schedule places greater emphasis on ambulatory care and health centre training than most programs in the United States, and more integration with specialists in the hospital setting than is usually found in those vocational programs based on the British model.

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3. **Objectives :**

Mutually satisfactory objectives were determined with chairmen of the specialty departments responsible for training family medicine residents. Whenever possible, they were related to studies of frequently occurring health problems in Bahrain and elsewhere (unpublished data, F.P.R.P. Bahrain).[14 – 19] These objectives were then converted into assessment forms similar to **Table 2** for most of the specialities. Appropriate revisions will be made periodically depending on further experience and the evolving health needs in this country. If other programs would like to use these forms as guides in their own planning, the full series may be obtained by writing to the author.

4. **Evaluation :**

A comprehensive system of evaluation has been developed with participation from department chairmen and residents. This includes: (a) evaluation of resident's performance on each specialty service **(Table 3).** (b) assessment of educational content of rotation *(Table 2)*. This form is based on the previously mentioned objectives and encourages self analysis by the involved resident along with more objective comments by the preceptor. (c) overall assessment of specialty rotation by residents **(Table 4).** and (d) periodic multiple choice examinations. Residents correct their own exams and thus become aware of strengths and deficiencies in their congnitive knowledge.

5. **Academic Affiliation with American University of Beirut :**

In order to provide strong academic input into the residency and capitalize on the educational resources of an outstanding medical institution, an affiliation agreement was reached between the Ministry of Health in Bahrain and the American University of Beirut after careful study by both parties. This innovative approach is intended to assure high standards for the residency program and facilitate exchange of personnel and training opportunities. The following tangible benefits have already resulted from this association: (a) Faculty members from A.U.B. participate in a three month orientation program offered to first year family medicine residents. Resource personnel are provided from many disciplines including sociology, epidemiology, biostatistics, and public health. (b) In-depth presentations complete with detailed outlines are offered in core curriculum subjects four days out of each month by faculty members from the A.U.B. Medical School. The major specialty areas applicable to family medicine will be covered over a three year period. During this past academic year, sessions were offered in such subjects as infectious disease, pulmonary medicine, endocrinology gastroenterology and nephrology.

It is anticipated that consultants from Bahrain will participate in these presentations and health centre general practitioners are also invited, thus encouraging mutual exchange in information. An orientation toward ambulatory care is promoted by holding conferences in one of the health centres. (c) The chairman of the Department of Family Medicine at A.U.B. is responsible for assuring that the academic quality of the Family Medicine Program in Bahrain is comparable to international standards of training. (d) This chairman is also responsible for developing and administering certification examinations in family medicine to graduates of the Family Medicine Residency.

6. **Conferences for First and Second Year Residents :**

(a) Weekly conferences are held for residents according to their year of intake. They are given by specialist consultants and chief residents. Subject matter is determined by mutual agreement between the F.P.R.F. coordinator and respective department chairmen, thus assuring appropriate orientation to Family Medicine. (b) A weekly conference of two hours is held for all residents. Presentations are given primarily by family physicians and topics are based on a three year overall plan focused on family medicine. (c) The Chief of Medical Staff of Health Centres, Dr. Eoin Cotter, meets with each group of residents weekly from 7:00 to 8:30 a.m. to review medical subjects based on patient problems encountered in the health centres. (d) Weekly literature review sessions are held for second year residents who give approximately 70 per cent of the presentations. They are expected to review relevant topics of interest and unresolved issues raised by their mentors. In this way residents are stimulated to develop initiative, habits of self education and leadership qualities. The remaining conferences are presented by the Co-ordinator using educational aids such as

audiocassettes and self assessment exams.

7. **Identification of Teachers :**
A training program for selected health centre tutors has been conducted by Dr. Cotter over the past two years with the development of a cadre of teachers who are making significant educational contributions to this residency. In addition eight of these physicians were appointed as health center faculty. They were assigned responsibility for co-ordinating teaching in the following areas which were determined to be especially important in rounding out the third year residents' education; (a) Maternal health; (b) Child health; (c) Geriatrics; (d) Rehabilitative medicine; (e) Laboratory medicine in health centres; (f) Radiology training based on x-rays encountered in the health centres; (g) Video-taping of resident/patient encounters; (h) Patient education; (i) Audits and quality assurance; and (j) Protocols for managing frequently occuring problems in health centres. With the assistance of an educational psychologist, these physicians were given additional training to help them design objectives for each subject, plan methodology, identify resource personnel, and carry out periodic evaluations.

8. **Teaching Health Centres :**
Six of the larger health centres were designated as teaching centres. Each resident is assigned to a specific centre and supervision is provided by selected tutors. Residents spend one shift per week in health centres during their first and second years and two to six shifts per week in their last year, depending on the nature of their electives and remedial work. In this way they develop a continuous relationship with patients in an environment similar to their future practice setting.

9. **Department of Family Medicine in Salmaniya Medical Centre (S.M.C.) :**
A non-structural Department of Family Medicine has been created at S.M.C. with the coordinator serving as chairman. This denotes official recognition and facilitates communication and support between the F.P.R.P. Co-ordinator and other department chairmen individually and at Medical Board meetings. Departmental designation should also enhance future expansion and acceptance of family medicine in the hospital setting.

10. **Career Ladder :**
A career ladder has been developed by the Ministry of Health for family physicians. Promotions and salaries compare favourably to those in other specialties.[20] This helps to assure status for family physicians and reassurance to medical students who are considering residencies in family medicine.

MISCELLANEOUS ACTIVITIES

In addition to the above activities which were necessary to establish a solid foundation for the family medicine residency, the following activities contributed to further enrichment of the program :

1. **Periodic Review of Training :**
The Family Practice Residency Program Director meets periodically with each involved department chairman to review evaluations, revise objectives, resolve problems and plan for the future.

2. **Ongoing Meetings with Residents :**
Similar meetings are held with family practice residents as groups and individually to review their progress, work out problems encountered during their training, discuss their concerns and make plans to correct any deficiencies noted in performance.

3. **Rotation for A.U.B. Residents :**
A two month rotation in Bahrain has been developed for second year family practice residents from Beirut. This experience has received positive evaluations from both residents and preceptors. Residents are exposed to the type of care delivered in health centres and participate in the activities of the F.P.R.P. program in Bahrain. An important benefit of this arrangement is the opportunity for exchange and stimulation between residents from both programs.

4. **Development of Resource Centre and Education Unit :**
Three rooms have been designated in the North Muharraq Health Centre for resident education. These rooms are spacious and well equipped with projectors, audiocassette recorders, video tape units, cameras and teaching cassettes from the United States and Great Britain. It is anticipated that basic reference books will be added in the near future. These facilities are superb and add to the enjoyment of teaching and the morale of the residency.

5. **Determination of Lines or Responsibility :**
In the initial stages, most

decisions were made by the F.P.R.P. Committee. These usually involved matters of planning and policy. Firm lines of authority were not established and as the residency progressed it became difficult to make day to day decisions.

At times those given responsibilities did not feel they had the authority to carry out their assignments. In order to remedy this situation the residency program was organized along the following lines : (a) The coordinator/director is responsible for the overall functioning of the residency whether in Salmaniya Medical Centre, the health centres or the community. He reports administratively to Dr. Rashid Fulayfil, the Assistant Undersecretary for Hospitals and Training, and academically to Dr. Caesar Shediac, the Chairman of the Department of Family Medicine at A.U.B. (b) An in-hospital coordinator is responsible for overseeing resident training within the hospital. He will meet with department chairmen and residents, clarify objectives, plan conferences and in general make sure that the residents are receiving appropriate training in each of the specialty areas designated in the approved curriculum framework **(Table 1).** (c) A health centre coordinator is responsible for resident education in the health centres.

Detailed job descriptions have been approved by the F.P.R.P. Committee for both coordinator positions. (d) Responsibilities were also determined for consultants who participate in training family medicine residents in their respective specialties.

SPECIAL CONSIDERATIONS

The following issues are mentioned because of their importance. Other developing programs may be able to avoid undue problems by addressing these concerns before initiating residencies.

1. **Development of Budgets :**
Like many programs in the U.S.A. and elsewhere, the F.P.R.P. in Bahrain was started without clear cut budgets. Considerable progress has been made over the past year in this regard, especially in areas of materials and services, capital goods and equipment. However, the personnel portion is awaiting final approval by the appropriate authorities in the Civil Service Bureau and Ministry of Health. Thus many physicians have been instructing family medicine residents without additional remuneration for time spent in teaching and preparation outside of their regular working hours. In order to avoid subsequent dissatisfaction and ill-will, developing programs should have budget formulas approved prior to instituting the residency whenever possible.

2. **Development of Academic Traditions :**
It probably takes years for institutions to develop an academic atmosphere which reflects the spirit of critical inquiry mentioned by Yacoubian,[21] where questions from house staff are welcomed and where consultants are not unduly burdened by service commitments. Perhaps tension is inevitable during a transition from service orientation to one of both service and teaching. This academic evolution can be enhanced however, by making sure that administrative policies and remunerative formulas are responsive to educational priorities. Thus, provisions should be made for well-equipped conference rooms. Teaching areas should be identified so that patients can be discussed in private when making rounds. Ordering procedures should facilitate purchasing of educational materials such as books and periodicals which can become outdated if delays are prolonged. Also grants can be arranged for doctors who are interested in pursuing research projects and adequate secretarial help provided to those who are preparing talks, slides and papers.

3. **Overcommitment :**
Rapid expansion of health care on numerous fronts is bound to create stress on all those involved. It is likely that too many institutional commitments will lead to frustration for reachers, residents and administrators. Thus, as family medicine programs are planned it is important to set priorities carefully. The optimum number of residents should be determined, adequate funding assured, and additional educational endeavors timed so they will not cause undue interference with teaching commitments to family medicine residents.

4. **"Town-gown Syndrome":**
At times physicians in the hospital tend to downgrade the efforts of those in health centres. Likewise, doctors in health centres become upset with their hospital based colleagues, especially when they do not receive reports concern-

ing patients referred to them. This situation is not limited to Bahrain, but does reflect a significant problem which needs to be overcome in order to provide a supportive atmosphere for family medicine. Considerable improvement is likely to occur with time, because as family medicine residents receive training in S.M.C. and the health centres they also provide constructive interaction and improved communication between physicians in both facilities.

5. **Identify and Respect for Family Medicine :**

There is a common tendency for some specialists to feel superior to general practitioners, not only in Bahrain but most likely throughout the world. Reasons for this attitude have been described elsewhere.[12] Usually those specialists who understand the challenges of family medicine or who have been general practitioners themselves are quite supportive. Respect for family medicine will increase as family medicine residencies become established, as other specialists develop greater appreciation for the principles and goals of this specialty and as the general level of care in the health centres continues to improve. This respect is necessary if a program is to attract the better medical students, gain the support of medical colleagues and maintain the confidence of society.

CONCLUSION

The Family Medicine Residency Program in Bahrain has made considerable progress over the past several years. A solid foundation has been established and committed residents recruited. The program has the support of the Ministry of Health and many dedicated teachers from Salmaniya Medical Centre, the American University of Beirut and the health centres. These strengths are likely to sustain the residency through future challenges pertaining to the stresses of unprecedented expansion and lack of an academic tradition. Most likely, the forthcoming decade will be an exciting time for family medicine in Bahrain and the Middle East as we attempt to carry out the advice of William Osler given 80 years ago : "The patient is the reason for teaching, and clinical excellence represents the foundation of any good teaching program."

ACKNOWLEDGEMENTS :

The author wishes to acknowledge the helpful assistance from D.H.L. Business Systems staff in preparing and editing this manuscript and to Dr. Harout Armenian for reviewing this article prior to publication.

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TABLE 1.

APPROVED CURRICULUM FRAMEWORK F.P.R.P. BAHRAIN

ORIENTATION & BACKGROUND

Community Medicine — 1 month
Introduction to Family Medicine - 2 months

Field work and
Integrated presentations over
First 3 months of residency

Months 4 thru 15*

Internal Medicine (Includes ICU)	Paediatrics (Includes New-born)	Surgery (Minor, Burns ortho, Urology, Peds)	PSYCH.	VAC.

Months 16 thru 24*

OB/GYN	A & E	EYE	ENT	DERM	RAD.	VAC.
Conference on rotations and Core Speciality subjects once per week. Health Centre 1 day per week. Core Content review every Wednesday 7-9.00 p.m. 1-2 shifts per week in A/E.						

Months 25 thru 36*

Health Centre approximately 4 shifts per week. Electives & selectives. Remedical experiences when necessary. Identifiable project in P.H. and/or Community Medicine equivalent to 200 hr experience in work and training. Structured experience in Maternal and Child Health.	VAC.
Conference — Clinical Pathology correlation once per month. Clinical Radiology once per month. A & E comprehensive review once per week. Core Content review 2 hours every week.	

In Patient 25% **Ambulatory 25%** **Health Centre & Community 50%**

Faculty members from the American University of Beirut will provide in depth consultation in core areas 4 days each month.

It is anticipated that supplementary conferences & educational projects will be undertaken at least two afternoons per week during the second and third years. They will deal with concepts of Family Medicine, Frequently occuring problems encountered in Ambulatory Care, Community Medicine, Public Health, Record Sytems, Patient education etc. ...

* When residents have transferred from other programs, rotations such as out patient Internal Medicine may be substituted for the speciality in which they have trained.

Leave out :

Revised 1981 &

VRH/Sq

TABLE 2

STATE OF BAHRAIN — MINISTRY OF HEALTH
FAMILY PRACTICE RESIDENCY PROGRAM

Objectives and Evaluation for Psychiatry
Self-Evaluation "Comfortability" scale to be applied by resident during this rotation :
A : Very comfortable in this area
B : Moderately comfortble — enough to manage edequately
C : Uncomfortable

Problem or Area of Concern		"COMFORTABILITY" Resident Self-Rating			COMMENTS by Preceptor
		Prior to Rot.	Mid way	End of Rot.	
Overall capabilities and skills					
1. Ability to take an appropriate psychiatric history					
2. Integration of psychiatric and medical history					
3. Evaluation of mental status					
4. Integration of mental exam and physical exam					
5. Ability to communicate with psychiatric patients					
a) Bahrainis	With interpreter				
	Without interpreter				
b) Persians	With interpreter				
	Without interpreter				
c) Indians	With interpreter				
	Without interpreter				
6. Arrangement of voluntary hospitalization for patients with psychiatric problems					
a) Dealing with patients					
b) Dealing with family					
c) Dealing with Hospital					
d) Dealing with Consultant					
7. Management of suicidal patients					
8. Management of withdrawal syndrome					
a) Alcohol					
b) Opiates					
c) Barbiturates, and Sedatives/hypnotics					
9. Recognition and management of drug overdose					
10. Use of psychotropic drugs in an acute situation (acutely psychotic, violent, or suicidal patient)					
11. Use of Community resources					
a) Community psychiatric nursing					
b) Social workers					
c) Alcoholics anonymous					
d) Others					

(Page 1 of 2)

TABLE 3

FAMILY MEDICINE RESIDENCY PROGRAM
STATE OF BAHRAIN — MINISTRY OF HEALTH

STAFF EVALUATION OF RESIDENT

Rotation : _____ Name of Resident : _____

Period of rotation : _____ Year First : _____ Second : _____ Third : _____

Please compare the performance of this resident to your expectations for residents who are training to be Family Physicians rather than specialists in your field. This information is confidential. The Family Practice Program Coordinator will discuss these evaluations only with the involved resident.

	Unsatisfactory	Below Average	Average	Above Average	Outstanding	Unable to Evaluate
Appearance						
Punctuality						
Integrity						
Relationship with Colleagues and other staff						
Communication with patients						
Attendance to records						
Initiative						
Diligence (Capacity for work and follow through)						
Basic knowledge						
Quality of Patient Care						
Clinical Judgement						
Amount of reading and use of educational resources						
Technical skill						
Openness to advice						
Leadership ability						
Expression of English						
Progress during rotation						
Overall assessment						

Have you discussed this evaluation with the resident Yes _____ No _____

Strengths of Resident

Suggestion for improvement

_____
Preceptor

_____
Signature of Preceptor

Date : _____

15 April, 1981
VHR/sg.

Please return to the coordinator of the Family Medicine Program. You may use the back of this form for additional comments.

TABLE 4

FAMILY MEDICINE RESIDENCY PROGRAM
STATE OF BAHRAIN — MINISTRY OF HEALTH

RESIDENT EVALUATION OF SPECIALTY ROTATION

Rotation _____ Resident _____

Date _____ Year. 1st _____ 2nd _____ 3rd _____

Please rate your experience on this service according to the following scale :
Excellent = 5 Above Average = 4 Good = 3 Fair = 2 Poor = 1 Unable to evaluate = 0

1. Suitability of patient material _____
2. Quantity of patient material _____
3. Quality of :
   - (a) Teaching by consultants _____
   - (b) Teaching by attending staff (Residents) _____
   - (c) Conferences _____
   - (d) Patient care facility _____
   - (e) Teaching in out patient clinic _____
   - (f) Opportunity to learn by doing _____
4. Attitude of staff toward the concept of Family Medicine _____
5. How often was call ?
6. Was call valuable for you ? ☐ ☐
7. Was material presented applicable to your future in Family Practice ? ☐ ☐
8. Do you feel that your knowledge of this area is now edequate for Family Practice ? ☐ ☐
9. Were you given fair access to those procedures available and within your ability ? ☐ ☐
10. Were you satisfied with the responsibility you were given ? ☐ ☐
11. Did you feel accepted :
    - (a) by patients ? ☐ ☐
    - (b) by hospital staff physicians ? ☐ ☐
    - (c) by nurses ? ☐ ☐
12. Did you have sufficient time for study ? ☐ ☐
13. Was duration of rotation — Satisfactory ? ☐ ☐
    - — too short ? ☐ ☐
    - — too long ? ☐ ☐
14. General impression (1 — 5) _____

Date when this form was completed : _____

30 April, 1981
VRH/sg.

Please use the back of this form for comments (including strengths and suggestions for improvement). Thank you for completing this form. Your comments will be given careful consideration.