A STUDY TO IDENTIFY THE COSTS AND BENEFITS OF THE FAMILY-PRACTICE RESIDENCY PROGRAM AT ST. JOSEPH HOSPITAL AND REHABILITATION CENTER, WICHITA, KANSAS

A Problem Solving Thesis

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Hospital Administration

By

Major Bill F. Bulla, MSC

Waco, Texas

August 1975

APPROVED BY THE ACADEMY OF HEALTH SCIENCES, U.S. ARMY:

Director of the Program

APPROVED BY THE THESIS COMMITTEE:

Chairman

APPROVED BY THE GRADUATE COUNCIL:

Dean of the Graduate School

DATE: August 16, 1975

ACKNOWLEDGMENTS

The writer wishes to express his appreciation to the entire staff of St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas; and, in particular, to John Bohrer, Administrative Assistant; and Keith Lewis, Hospital Accountant, for their many hours of valuable time and assistance provided to the writer. This writer also wishes to acknowledge the patience and understanding of his wife, Marilyn, who contributed immeasurably to the timely completion of this paper.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

General Information

The practice of family medicine has developed through time and out of necessity by generalists who recognized the vital role of family relationships in the care of their patients. This acceptance by general practitioners for the total responsibility and comprehensive care of the family is based upon the fundamental quality of concern.[1]

The American Medical Association defines the family physician as one who:

> (1) serves as the physician of first contact with the patient and provides a means of entry into the health care system; (2) evaluates the patient's total health needs, provides personal medical care within one or more fields of medicine, and refers the patient when indicated to appropriate sources of care while preserving the continuity of care; (3) develops a responsibility for the patient's comprehensive and continuous health care, and when needed acts as a coordinator of the patient's health services; and (4) accepts responsibility for the patient's total health care, including the use of consultants, within the context of his environment, including the community and the family or comparable social unit.[2]

Seven years have passed since Dr. John Millis called for a change in direction for medical education toward the

training of more family physicians and increased emphasis on family practice.[3] In December, 1968, the House of Delegates of the American Medical Association approved a set of essentials for residency training in family practice; and in April, 1969, the American Academy of General Practice published an official guide to the requirements for the establishment and operation of an approved family-practice residency program.[4]

The highly specialized skills of the family physician require for their development a carefully designed educational experience.[5] Medical education can be divided into four distinct phases: (1) the premedical period of undergraduate work in the college; (2) undergraduate education in the medical school; (3) graduate medical education, most of which is carried out in the hospital; and (4) the lifelong, continuing educational needs of the practicing physician.[6]

A period of graduate medical education is required for the further development of the knowledge and skills acquired as a medical student to qualify the physician for the independent practice of medicine.[7] The residency portion of graduate medical education has become established as an integral part of the total education of a physician, whether it be for a career in family practice or a complex surgical

specialty.[8]

A family-practice residency program is a formal, normally nationally approved, three-year course in graduate medical education which includes those "essential" elements of curriculum required by the American Academy of General Practice, the American Medical Association, and the Advisory Board for Medical Specialties. The program combines the one year of internship with the two years of residency within a single three-year program.[9]

Family practice residencies have experienced exponential growth in recent years.[10] By the opening of the 1970-1971 residency year, 46 programs had been approved in the United States, with 286 students enrolled in the programs.[11] A survey made by the American Academy of Family Physicians in July, 1973, showed 164 approved programs with a total of 1,754 resident positions filled. While the total percentage of positions filled was 59 per cent, 86 per cent of the first year positions were filled.[12]

The role of the hospital in graduate medical education has expanded in scope and complexity with ever-widening horizons of scientific, social, and educational advances.[13] Many family-practice residency programs throughout the country

are now providing model practice settings that enable the effective teaching of graduate medical education through preceptorship, example, and didactics.[14]

With a clear understanding of the nature and characteristics of graduate medical education, and in particular family-practice residency programs, the reader is in a better position to analyze the costs and benefits of such a program.

Hospital Setting and History

St. Joseph Hospital and Rehabilitation Center is a short-term, acute care, not-for-profit general hospital owned and operated by the Sisters of St. Joseph of Wichita, Kansas. It is separately incorporated and has a combined sister-laity board of trustees. In 1925, the Congregation of the Sisters of St. Joseph of Wichita, Kansas, a pontifical order of religious women, assumed operation of the 135-bed Wichita Hospital and Nurses Home which had its beginning in 1879. In 1944, a new structure was built and renamed St. Joseph Hospital. The hospital was expanded to meet community needs in 1951, 1957, and 1961 when it acquired its present name. The addition of 121 beds in 1968 enlarged the hospital to its current bed total of 441 beds and 33 bassinets.

The hospital serves a total population of approximately 350,000 which includes all of Sedgwick County and other adjacent communities.

In 1973, construction was begun on a new $25 million, 7-story hospital tower. The new facility is scheduled for completion in early 1975 and will expand the medical complex to approximately 600 beds.

St. Joseph Hospital and Rehabilitation Center is a comprehensive medical rehabilitation center, one of only three in the state and the only one in south central Kansas. One significant aspect of this hospital's community role is a rehabilitation program for patients suffering from strokes. The Director of this program is a physiatrist, and a team approach to patient care is utilized.

Background on Family-Practice Residency Program

A family-practice residency program was established at St. Joseph Hospital and Rehabilitation Center in 1971. A separate Family Practice Center building was constructed adjacent to the emergency room and outpatient clinic and opened in December, 1971. The family practice program has grown from no house staff three years ago to the present

number of fourteen.[15]

The Director and Assistant Director of the program are full-time members of the staff, and patients are seen by the directors and residents in the family practice center. All the inpatient and outpatient services of the hospital are available to support the program.[16]

The curriculum for this three-year residency program is rotational in nature through the major services and clinics of the hospital. In addition, the resident receives training through lectures, rounds, office practice, rural practice, and practice in poor areas.[17] The objectives for the family practice residency program at St. Joseph's are set forth in Appendix A.

Conditions Which Prompted the Study

Joseph A. Heeb, Administrator of St. Joseph Hospital and Rehabilitation Center, requested that a study be undertaken to identify the actual cost of the family practice residency program and set forth the benefits of such a graduate medical education program. The cost of this program has never been clearly identified since its implementation in 1971. The hospital has made a long-term commitment in its establishment of this program in graduate medical education.

Identifying the costs of the family-practice residency program is deemed necessary in order that management personnel may: (1) contain or reduce costs; (2) promote and/or measure efficiency; (3) formulate plans and policies for internal management as well as community planning; (4) interpret the public nature of education costs; and (5) make decisions on any further expansion of the program.

The hospital fully recognizes that the family-practice residency program cannot be evaluated solely on costs. There are benefits, many of which are intangible and not measurable in dollars, which can accrue to the hospital and the community. Therefore, the hospital desires that the study address benefits as well as cost determinations.

There is a great deal of controversy concerning who should finance the graduate education of physicians. The administrative staff indicated that a study of costs and benefits might clarify some of the economic issues at stake. Before the hospital can make decisions on this question and others, it must have some knowledge of what the present program actually costs. Negotiations with external entities for provision of educational costs can be enhanced as a result of accurate knowledge of total program costs. Of particular

concern to the hospital is future financial assistance from federal or state agencies, as well as the Wichita State University Branch of the Kansas University Medical School.

St. Joseph's is affiliated with the new Wichita State University Branch of the Kansas University Medical School on a "limited basis." There are no other graduate or undergraduate medical education programs at the present time. Joseph A. Heeb, the Administrator, indicated that information derived from this study may assist any future decisions on the expansion of this affiliation.

The Wichita Medical Education Association has recently established a subcommittee to evaluate the problem of medical education costs in the three community hospitals in Wichita. As a member of this association, the hospital feels that information derived in a study of its family-practice residency program may prove useful to all the hospitals in Wichita for costing and funding current or future programs in graduate medical education.

Statement of the Problem

The problem is to conduct a study to identify the costs and benefits of the family-practice residency program at St. Joseph Hospital and Rehabilitation Center, Wichita,

Kansas.

Definitions

Some of the terminology used to describe certain characteristics of cost analysis and determination can be confusing or misleading. The following definitions are provided to aid the reader to understand this paper:

Direct costs.--Direct costs are those costs identified or related directly to an organizational unit, service, or product.[18] In the hospital the cost of material, labor, and overhead which can be specifically attributable to the family-practice program are termed direct costs.

Fixed costs.--Fixed costs are those costs which do not change with changes in volume of production or service.[19]

Gross costs.--Gross costs are total costs or amounts expended in conducting a program.[20] For the purpose of this study, gross costs and total costs are used interchangeably and are comprised of direct costs and indirect costs.

Indirect costs.--Indirect costs are overhead costs that are uncontrollable by any one particular segment of the organization, but which can be identified in total. Indirect costs are not obviously traceable to individual units or services and may require a somewhat arbitrary method of

assignment.[21]

Net costs.--The net costs of the program are the investments or expenditures by the hospital in support of a particular program, or the gross cost minus related revenue.[22]

Unit costs.--Unit costs refer to the gross or total costs divided by the number of units of activity or service.[23]

Variable costs.--Variable costs are those costs that vary directly with volume of service or activity.[24]

Objectives

There are four general objectives which must be accomplished in order to solve the stated problem. These objectives are:

1. Identify and calculate the direct costs of the family-practice residency program.

2. Identify and calculate the indirect costs of the family-practice residency program.

3. Identify and calculate the net cost of the family-practice residency program.

4. Identify the benefits resulting from the hospital's family-practice residency program.

Limitations

The following limitations have been imposed on this study:

1. The study does not evaluate the manner in which the hospital has organized or conducts its family-practice residency program.

2. The study does not attempt to determine the responsibility for sharing the costs incurred by the family-practice residency program.

3. The study does not address the question of which external agencies or institutions should provide funds to offset the costs.

Facts Bearing on the Problem

Certain factors exist which bear directly upon the problem of identifying costs and benefits of the family-practice program:

1. At present, no other graduate medical education program exists at St. Joseph Hospital and Rehabilitation Center.

2. The hospital is subject to increased costs associated with maintaining a family-practice residency program.

3. The family-practice residency program is the

nucleus for operating the separate, free-standing family practice center. This center is operated on a fee-for-service basis.

4. Costs incurred by the family-practice residency program are largely determined by the model or approach taken in establishing the teaching environment.

5. The family practice center generally functions as an outpatient clinic for the hospital.

6. The hospital has had to offer significant fringe benefits in order to attract potential residents to its family practice program.

Research Methodology

Three methods of research were utilized in collecting and analyzing data for this study. An in-depth review of hospital and accounting literature was undertaken to ascertain recent trends and techniques for identifying costs and benefits which could be related to this study.

Personal interviews were conducted with persons in authority at St. Joseph Hospital and Rehabilitation Center. The purpose of the interviews was to determine the parameters for the study, identify the functional scope of their program in graduate medical education, and isolate those factors

which affect the cost of operating the family practice residency program. In addition, the interviews provided the writer a means of ascertaining the current methodology used by the hospital in its identification of costs and revenues associated with the program. The hospital staff was also questioned on what benefits they felt were accruing and to whom.

This study made full use of financial and statistical information already available in the form of budgets, Medicare reports, and accounting ledgers. The documentation furnished to the writer was analyzed and necessary data extracted for application to this study. For purposes of this study, costs are historical costs or expenses, derived from one complete fiscal year, 1973. When existing information did not provide an adequate basis for identifying costs or benefits, special analyses were made.

Review of the Literature

The medical literature is replete with commentary on the rising costs of medical care and changing trends in the health care industry. As a relatively new specialty of medicine, it is perhaps unfortunate that family practice came to fruition concomitant with vast changes in graduate

medical education, not the least of which is the ever-increasing cost of medical education.[25] That this is a complex and confusing dilemma is cliche.

The complexity of the graduate medical-education process, and the difficulties in measuring objectively the benefits or successes of family-practice programs are such that most are assessed in a very subjective manner.[26] Teaching-hospital operations, teaching-hospital costs, and the integration of graduate medical education and patient care are extremely complicated subjects. An effective system for identifying educational costs in the hospital can be no more simple than the complexities with which it must deal.[27]

There is obviously a cost involved in graduate medical education. For years this cost has been absorbed by residents through deferral of earnings, by the teaching staff through donation of their time, and by the patients through direct charges for hospital services. This system is being challenged from several sectors: the residents in their demand for higher salaries, the clinical faculty through the emergence of a full-time system, and the patients who, through third-party payers, are challenging the inclusion

of any educational costs in charges to the patients.[28]

Those responsible for graduate medical education in the hospital environment are also concerned about the cost of educational programs. This interest in identifying educational costs within the teaching hospital has increased substantially in recent years. There are two major reasons for this heightened interest: (1) increased recognition internally of the need for improved management of the programs; and (2) external pressures that require such program cost information.[29]

Augustus J. Carroll, noted author on program cost determination, suggests additional rationale for identifying costs of medical education: (1) to enlist new sources of support and to explain to a beneficiary of hospital services why he is being charged a given amount; (2) to increase the recipient's appreciation of the benefits provided to him by the hospital; (3) to justify hospital support for medical education; and (4) to justify appropriate payments by beneficiaries for hospital investments necessary to prepare for the future.[30]

Hospitals allocate resources to residents while, at the same time, residents provide a resource to the hospital

in the form of service as a teacher, student, and as a provider of care to patients.[31] The challenge, then, is for the hospital administrator and his staff to determine the optimum balance between the provision of all these services and the assignment or allocation of costs. Since the attainment of any hospital objective, however noble or worthy, requires the consumption of the hospital's limited supply of such resources, a major responsibility of hospital management is to expend these economic resources as wisely as possible.[32]

One of the first studies encountered in a review of literature in which an attempt was made to determine the cost of graduate medical-education programs was the pilot study by Augustus J. Carroll in 1969 on Program Cost Estimating in a Teaching Hospital. The objective of Carroll's study was to identify the most suitable criteria and procedures for determining the costs of various hospital programs to include residencies.[33] This study involved the Yale-New Haven Hospital and Yale University School of Medicine. Efforts by Carroll centered around deriving a basis for allocating various indirect costs and, together with direct costs, determining the gross costs of each program under

study. Of particular interest are the conclusions on the resident and intern portion of study: that the total (or gross) cost of $560,000 for house staff was a legitimate charge to patient care.[34]

The second major study accomplished in recent years was a pilot project involving seven medical centers. This study by Thomas J. Campbell followed the general methodology established by Carroll in his earlier study.[35] The Carroll approach to program-cost determination, which some writers consider a "land mark" effort, has not been received with complete acceptance with respect to methodology and/or results. The major point of discontent concerns the use of effort or time analysis as a basis for allocating costs to various programs. Some of the more vocal criticisms are directed at Carroll's use of questionnaires.

Albert W. Snokes states "that studies and conclusions based upon 'opinionnaires' are not very dependable."[36] The 1969 Campbell study acknowledged that experience with "effort reports" similar to the opinionnaires precipitated concern and criticism as to the validity of this technique in identifying and allocating costs.[37] Carroll himself acknowledged that concern over who should pay specific costs

often becomes so intense that it is allowed to affect the methods and results of cost determination.[38] Despite the long-term and costly studies that have been undertaken, no precise mechanism for identifying the true cost of a residency program has yet been published.[39]

Even though the American Hospital Association, various state hospital associations, and many hospitals have developed highly sophisticated cost-accounting and cost-finding systems, no uniformly accepted criteria and methodology for computing costs of graduate education in hospitals is available as of this writing.

The demand for accurate cost information on various programs, especially graduate medical education, continues to be reiterated throughout the literature and for a very good reason.[40] Hospital and educational costs are escalating, and decisions which affect these costs must be based on accurate cost information. If these decisions are to be rational, there must exist some framework within which direct and indirect costs as well as benefits may be analyzed in order that the option(s) chosen will most closely correspond to the social valuation of those costs and benefits.[41]

Footnotes

[1]Collin Baker, "What's Different About Family Medicine," Journal of Medical Education, XLIX (March, 1974), 229.

[2]American Medical Association, "Essentials of an Approved Residency in Family Practice," Directory of Approved Internships and Residences (Chicago: American Medical Association, 1973), p. 370.

[3]American Medical Association, "The Graduate Education of Physicians," The Report of the Citizens Commission on Graduate Medical Education (Chicago: American Medical Association, 1966), p. 229.

[4]American Academy of General Practice, Commission on Education, Graduate Education for Family Practice (Kansas City, Mo.: American Academy of General Practice, April, 1969), p. 132.

[5]Baker, p. 230.

[6]John H. Knowles, ed., Views of Medical Education and Medical Care (Cambridge: Harvard Press, 1968), p. 69.

[7]Association of American Medical Colleges, Report of the Committee on the Financing of Medical Education (Evanston, Ill.: Association of American Medical Colleges, October, 1973), p. 1.

[8]Ibid., p. 2.

[9]American Medical Association, "Essentials," p. 371.

[10]"Highlights of COTH Survey of House Staff Policy, 1973," Journal of Medical Education, XLVIII (November, 1973), 1040.

[11]Alex Gerber, The Gerber Report (New York: David McKay Co., Inc., 1971), pp. 72-73.

[12]American Medical Association, "Essentials," p. 38.

[13]John R. McGibony, Principles of Hospital Administration (New York: Putnam's Sons, 1969), p. 172.

[14]Baker, p. 234.

[15]Personal interview with John Bohrer, Administrative Assistant, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 4, 1974.

[16]Personal interview with James M. Donnell, Director of Family Practice Residency, St. Joseph Hospital and Rehabilitation Center, Wichita Kansas, March 11, 1974.

[17]Ibid.

[18]John Dearden, Cost Accounting and Financial Control Systems (Reading, Mass.: Addison-Wesley Publishing Co., 1973), p. 9.

[19]Ibid., p. 5.

[20]Augustus J. Carroll, Program Cost Estimating in a Teaching Hospital: A Pilot Study, ed. by Thomas J. Campbell and Mary H. Littlemeyer (Evanston, Ill.: Association of American Medical Colleges, 1969), p. 5.

[21]Ibid.; Charles T. Horngren, Accounting for Management Control (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), p. 333.

[22]Carroll, Program Cost, p. 5.

[23]Horngren, p. 208.

[24]Dearden, p. 5.

[25]Harold W. Maysent, "Health Education Costs in a Community Hospital," Journal of the Association for Hospital Medical Education, VI (First Quarter, 1973), 1.

[26]Harold E. Smalley and John R. Freyman, Hospital Industrial Engineering (New York: Reinhold Publishing Corp., 1966), p. 155.

[27]Augustus J. Carroll, "Medical Education Costs in Hospitals, Part 2," Journal of Medical Education, XL (November, 1965), 142.

[28]"Implications of Academic Medical Center Taking Responsibility for Graduate Medical Education: Report by the AAMC Ad Hoc Committee on Graduate Medical Education," Journal of Medical Education, XLVII (February, 1972), 82.

[29]"Analysis of Program Costs of Academic Health Centers," Journal of Medical Education, XLVIII (September, 1973), 793.

[30]Carroll, "Medical Education," p. 141.

[31]Rashi Fein and Gerald I. Weber, Financing Medical Education: An Analysis of Alternative Policies and Mechanisms (New York: McGraw-Hill Book Co., Inc., 1971), p. 122.

[32]Smalley and Freyman, p. 48.

[33]Carroll, Program Cost, p. 1.

[34]Ibid., pp. 73-90.

[35]Thomas J. Campbell, Program Cost Allocation in Seven Medical Centers: A Pilot Study (Evanston, Ill.: Association of American Medical Colleges, 1969), pp. 21-28.

[36]Albert W. Snoke, "Critique of the Study," in Program Cost Estimating in a Teaching Hospital: A Pilot Study, ed. by Thomas J. Campbell and Mary H. Littlemeyer (Evanston, Ill.: Association of American Medical Colleges, 1969).

[37]Campbell, p. iv.

[38]Carroll, "Medical Education," p. 143.

[39]Sylvester E. Berki, Hospital Economics (Lexington, Mass.: Lexington Books, 1972), p. 116.

[40]Maysent, p. 2; Howard J. Berman and Lewis E. Weeks, The Financial Management of Hospitals (Ann Arbor: Bureau of Hospital Administration, University of Michigan, 1971), p. 52; Berki, p. 83.

[41]Berki, p. 83.

CHAPTER II

DISCUSSION

General

The distribution of costs and benefits related to residency training is diffused and imperfectly measured.[1] Ordinary accounting procedures, even where the AHA Classification of Accounts is followed, do not always produce ledger figures which represent the full cost of a program.[2] An evaluation of this hospital's accounting procedures is beyond the scope of this study. However, it was necessary to make supplementary analyses and computations in order to derive the cost figures used in this study. Which cost is the correct cost? It remains open to debate. In the words of one authority:

> There is no one correct answer when costs are the results of computations involving the allocation of indirect costs or identification of direct costs. It cannot be said that the results of one approach are right and the results of another approach are wrong. The identification of costs are the results of the application of certain sets of assumptions. The assumptions are different, therefore the costs are different.[3]

Framework for the Analysis

The family-practice residency program was structured

to accommodate six physicians for each year of the three-year program. Due to its recent implementation and the fact that less than six started in 1971, the program had not, at the time of the study, reached the full complement of eighteen residents.[4] In addition, some of the residents had entered the program at various times during the calendar year. As a result, it was necessary to utilize the average number of residents for the time period under study in order that certain costs could be calculated. Therefore, this study utilized an average of twelve residents as the base against which costs directly attributable to the number of residents in the program were identified.

The situation at St. Joseph, wherein the family-practice residency constituted their total graduate and undergraduate program, greatly facilitated the allocation of certain costs. However, since different cost centers were involved, i.e., medical education and family practice center, it was necessary to cross departmental lines to identify many of the direct costs. The hospital has budgeted and expended funds to support the program from both cost centers.[5]

Within each of these cost centers the elements of their respective budgets are of a broad nature which has the

effect of "hiding" certain costs in that cost factors such as moving expenses, clothing allowance, and travel expenses are not readily apparent on the computer-generated financial reports. In order to trace certain direct costs, it was necessary to examine journal entries and accounting ledgers for the departments under study.

Due to the volume of transactions encountered during the data-collection effort, only those entries for $50 or more were extracted for further cross-checking on expenditures that had been made. In some instances it was necessary to utilize accounting reports for fiscal year 1973 to derive certain costs.

Inasmuch as the calendar year, fiscal year, and academic year for the residents do not coincide, it is presumed that the total cost of various elements of hospital operation are approximately the same for a twelve-month period of time. This approach permits a more accurate appraisal of annual costs.

The operation of the separate, free-standing family-practice center facility enabled this writer to identify some factors as direct costs to the residency program as opposed to relying on allocation of indirect costs.

It should be noted that during the course of this study, the hospital and this writer mutually agreed that a degree of confidentiality would be observed in the delineation of certain financial data.[6] Hence, some of the cost figures identified in the discussion and tables are set forth in gross amounts without a detailed breakdown of their components. Cost figures in this study have been rounded off to the nearest dollar.

Direct Costs

Salary and fringe benefits

The single most significant cost element of the program is the salary and fringe benefit "package" provided to each resident. The annual salary (stipend) varies according to which year of the program the resident is in. The average annual stipend for the three years is $9,900. A housing allowance of $250 per month is provided in addition to the stipend. F.I.C.A. and unemployment insurance are additional elements of payroll cost to the hospital.

The fringe benefits for the residents include the following:

1. Blue Cross-Blue Shield coverage for the resident and his family (up to $600).

2. Malpractice insurance.

3. Clothing allowance ($55 per year).

4. Membership fees in social or recreational clubs ($300 a year).

5. Laundry service for uniforms.

6. Free meals for residents and guest privileges for their families twice a week.

7. Moving expenses to relocate ($350).

8. Resident Travel (2,000 miles per year at 10¢ a mile).

9. Postgraduate seminars.

In some of these categories of benefits the actual cost incurred by the hospital was less than that which is allowed; e.g., variations in size of family affects health insurance coverage or the number of meals that might be eaten. It should be recognized that while this study addresses actual costs, there are "potential costs" that can significantly affect the total cost of the program if the residents choose to maximize certain benefits.

The breakout of direct costs for salaries and fringe benefits for the residents are summarized in Table 1. Even though provisions exist for resident travel reimbursement,

TABLE 1

DIRECT COSTS FOR RESIDENTS

Element of Cost	Subtotal	Total
Salaries		
Stipend[a]	$105,248	
Housing Allowance[b]	14,250	
F.I.C.A.[c]	6,127	
Unemployment Insurance	1,122	
Total Salary		$126,747
Fringe Benefits		
Blue Cross-Blue Shield	$ 4,708	
Malpractice Insurance	3,600	
Clothing Allowance[d]	600	
Membership Dues	3,600	
Laundry Service	936	
Meals[e]	5,038	
Moving Expenses	2,100	
Postgraduate Seminars	4,100	
Total Fringe Benefits		$ 24,682
Total		$151,429

[a]Includes housing allowance for last six months.

[b]For the first six months of the year, housing allowance was charged off to supply expenses.

[c]Social Security Tax.

[d]Based on five sets per week at 30¢.

[e]Based on $1 per meal.

Source: These calculations are based on data derived from the hospital's accounting ledgers, expense statements, and confidential interviews with hospital staff members.

records failed to indicate that monies had been expended for this purpose during fiscal year 1973. While some would classify F.I.C.A. and unemployment insurance as mandatory costs, they would not be incurred by the hospital if its residency program did not exist.

Other direct personnel costs

There are other personnel costs incurred by the family-practice center and medical education department which are identifiable as direct costs to the program. In the absence of other graduate medical education programs, the personnel costs in the medical education department for its director, assistant director, secretary, and teaching stipends for other physicians become direct costs to the family-practice program The salaries for the director and assistant director of the family-practice center, as well as its clerical and other staff, are also direct costs identified with the program. Fees for consultants and their travel expenses for purpose of seminars with the residents are direct costs to the program. The direct costs for Other Personnel are contained in Table 2.

Supplies and equipment

The same general rationale employed for direct costs

TABLE 2

DIRECT COSTS FOR OTHER PERSONNEL

Element of Cost	Subtotal	Total
Medical Education Department		
Salaries[a]	$117,895	
F.I.C.A.	5,240	
Unemployment Insurance	1,272	
		$124,407
Family Practice Center		
Salaries[b]	$ 84,438	
F.I.C.A.	4,398	
Unemployment Insurance	832	
		$ 89,668
Fees for visiting professors, public relations, resident orientation expenses		$ 1,981
		$216,056

[a]Includes educational stipends paid to hospital physicians, and salaries of the Director and Assistant Director for Medical Education.

[b]Includes monies paid to Director and Assistant Director of Family Practice Center.

Source: These calculations are based on data derived from the hospital's accounting ledgers, expense statements, and confidential interviews with hospital staff members.

on other personnel is utilized for supplies and equipment. These figures are actual expenditures extracted from hospital accounting records and adjusted for allocations identified in Tables 1 and 2. These are summarized in Table 3.

TABLE 3

DIRECT COST FOR SUPPLIES AND EQUIPMENT

Element of Cost	Subtotal	Total
Family Practice Center		
Supplies[a]	$ 7,311	
Equipment Rental	3,942	
Building Depreciation	3,972	
Building Maintenance	96	
Equipment Replacement and Repair	1,372	
Equipment Depreciation	2,683	
Other	324	
Subtotal		$19,700
Medical Education Department		
Supplies[b]	$14,114	
Building Maintenance	180	
Equipment Replacement	261	
Equipment Depreciation	799	
Building Depreciation	526	
Subtotal		$15,880
Total		$35,580

[a]Adjusted for housing allowance and employee benefits identified in Table 1.

[b]Adjusted for housing allowance and resident fringe benefits identified in Table 1 and 2.

Source: Data for these calculations was derived from accounting ledgers and hospital accounting reports.

Total direct costs

The total direct costs of the family-practice residency program are summarized in Table 4.

TABLE 4

TOTAL DIRECT COST OF RESIDENCY PROGRAM

Salary and Fringe Benefits for Residents	$151,429
Other Direct Personnel Costs	216,056
Building, Supplies and Equipment	35,580
Total	$403,065

Indirect Costs

Medical library

Operating costs for the medical library for this period totaled $15,469, with $8,737 attributable to salary for the librarian. The librarian estimated that approximately 15 per cent of her time was devoted to research and assistance for residents. The librarian further estimated that 10 per cent of total library usage was by the residents.[7] Indirect costs for the family-practice program by the medical library are $1,311 for librarian salary and $673 for other operating costs.

Housekeeping

The indirect cost for housekeeping is allocated to the family-practice center and medical education department, based on housekeeping labor distribution. There are 1,495 man-hours per year required for the center and 130 man-hours per year for medical education. The cost per hour is $5.10. These statistics are based on a two-week test period. The annual indirect costs for housekeeping are:

1.	Family practice center	$7,632
2.	Medical education	663
	Total	$8,295

Operation of plant

Indirect costs for plant operation are allocated to the family-practice center and medical education on the basis of square footage. Total square footage for the hospital is 226,126, and the operation of plant cost for the year was $223,058. There are 3,360 square feet and 1,409 square feet in the two respective cost centers. The cost per square foot was $.986. The indirect costs for plant operation include fuel, light, power, water, and so forth. Direct costs for:

1.	Family practice center	$3,313
2.	Medical education	1,389
	Total	$4,702

Communications

The allocation of indirect costs for communications is based on the number of nonpatient telephones in use. The total cost of communications for the hospital was $124,229, and there were 298 nonpatient telephones in use. The family-practice center has one such telephone, and medical education, four. The indirect cost for communications are:

1.	Family practice center	$ 417
2.	Medical education	1,668
	Total	$2,085

Laundry and linen

The family-practice center has indirect cost allocated to it for laundry and linen support, based on the number of pounds processed by the hospital. The hospital processed 4,891 pounds of laundry for family practice out of a total of 1,800,769 pounds for the hospital. The total cost of laundry and linen operations for the year was $179,156, at a rate of $.10 per pound. The indirect cost of laundry and linen for the family-practice center was $489.

Total indirect costs

The total indirect costs which are identified for the family-practice program are summarized in Table 5.

TABLE 5

TOTAL INDIRECT COST FOR PROGRAM

Medical Library	$1,984
Housekeeping	8,295
Operation of Plant	4,702
Communications	2,085
Laundry and Linen	489
Total	$17,555

Total or gross cost

The total direct costs of $403,065 and total indirect costs of $17,555 yields a total or gross cost of the family-practice residency program of $420,620.

Net Costs

Before net costs can be identified, it is necessary to address the element of revenue which can logically be identified with the family-practice residency program. As mentioned earlier, the residents and the directors of the program are the nucleus of the family-practice center which operates as an outpatient service for the hospital on a fee-for-service basis.

Residents in the family-practice program provide essential services to patients, both on behalf of the hospital and the directors of family practice. These services and revenue generated from both hospital charges and professional fees should be recognized by the hospital.[8] This consideration makes net costs more realistic than total or gross costs.

There was no delineation in any of the documents provided to this writer of inpatient revenue which may have accrued to the hospital through the family-practice center. Families which are followed and treated on an outpatient basis by the residents in the family-practice center may require admission to the hospital for proper care and treatment. When this occurs, the patients are formally admitted by either the director or assistant director of the program.[9] A discussion of the rationale for these procedures is beyond the scope of this study. This situation does generate revenue for the hospital. The question of whether or not these patients would have been hospitalized somewhere else if the family-practice center were not in operation is a moot one.

Since actual revenue figures were not available in this regard, a supplementary analysis was made. Information

gathered in a private interview indicated that approximately 1,050 admissions in 1973 were accounted for by the director and assistant director of the family-practice center. The proportion of these patients actually seen, and subsequently followed by the residents, could not be determined.

Based on this statistical information, a reasonably accurate estimate of inpatient revenue from family-practice center can be made. The per diem patient earnings multiplied by average length of stay; and this, in turn, taken times the number of admissions yields a net revenue of $46,242. At the request of the hospital administrator, the actual statistics for each of these factors are not included in this discussion.[10]

Revenue is also generated for the hospital from fees and charges for outpatient services performed in the family practice center. In addition, revenue is generated from the use of hospital ancillary services which are beyond the physical capability of the center such as special laboratory and X-ray procedures. The revenue figures identified in Table 6 are based upon the number of procedures and earnings per procedures from the respective services. These component factors have not been included in the study by mutual agreement of the hospital and the writer.[11]

TABLE 6

REVENUE FROM OPERATION OF FAMILY PRACTICE CENTER

Element of Revenue	Subtotal	Total
Family Practice Center		
Professional fees	$97,938	
Family Practice Laboratory	5,870	
Family Practice EKG Readings	1,072	
Total from Center		$104,880
Services by Hospital for Family Practice Center		
Laboratory	$13,245	
X-ray	25,931	
EKG	1,592	
Total from Hospital		$ 40,768
Total Revenue		$145,648

Source: Based on figures obtained from the hospital's detailed reports on earnings from patients and family-practice summary report.

As a result of their affiliation with the medical school at Wichita State University, the hospital annually receives funds to support the graduate medical education program in family practice. The hospital received $39,125 for the year 1973.[12]

The net cost of the family practice residency program for 1973 is identified in Table 7.

TABLE 7

NET COST OF RESIDENCY PROGRAM

Element	Revenue	Cost
Gross Cost		$420,620
Less:		
Outpatient Revenue	$145,648	
Inpatient Revenue	46,242	
Support from State	39,125	$231,015
Net Cost		$189,605

Analysis of Costs

The total operating expenses for the hospital in fiscal year 1973 were $13,209,553.[13] The importance of evaluating the cost aspect of the program in terms of net cost is readily apparent when the following comparisons are made:

1. Total cost ($420,620) as a percentage of total hospital operating expenses is 3.1 per cent.

2. Net cost ($189,605) as a percentage of total hospital operating expenses is 1.4 per cent.

St. Joseph had 132,110 actual patient days with 82 per cent bed occupancy for the year.[14] The cost per patient

day can be evaluated by comparing gross cost versus net cost as follows:

1. Cost per patient day based on gross cost is $3.18.

2. Cost per patient day based on net cost is $1.43.

Based on the average number of residents for 1973 of twelve, a comparison of per resident cost of the program can be made.

1. Annual cost per resident based on gross cost is $35,052.

2. Annual cost per resident based on net cost is $15,800.

These cost findings must not be taken out of context. Caution should be exercised by readers of this study when using these figures to compare different graduate medical education programs between hospitals. Horngren notes in this regard: "Many proponents of functional costing are grimly determined to compute a unit cost for nearly any activity without bothering to distinguish between variable and fixed behavior patterns."[15]

A high proportion of the gross costs of the family-practice program are fixed costs in terms of salary and fringe benefits for the residents. For this hospital it is

36 per cent. This is based on costs identified in Table 1. While enrollment in the program itself can vary, almost all of the salary and fringe benefits costs become fixed costs to the hospital. Fluctuations in enrollment can be expected to cause dramatic variations in total costs, net costs, and per resident costs. If the cost figures identified in this study are to be used for decision-making purposes, this consideration must be clearly kept in mind. Table 8 is a summary of the costs identified in this study.

Benefits

A discussion of the benefits of the family-practice residency program must, of necessity, be addressed in light of several factors:

1. The program has been functioning for less than three years, making it difficult to assess its full impact.

2. The community, the hospital, the patient, and physician can have different utility functions for graduate medical education in terms of benefits accruing from the end product.

3. Benefits of graduate medical education can vary, depending on the values one places on such programs.

4. Values are largely the result of opinion, and

TABLE 8

COST SUMMARY FOR RESIDENCY PROGRAM

Element	Subtotal	Total
Salary and Fringe Benefits for Residents		
Salaries	$126,747	
Fringe Benefits	24,682	
Total		$151,429
Direct Costs for Other Personnel		
Family Practice Center	$124,407	
Medical Education Department	89,668	
Miscellaneous	1,981	
Total		$216,056
Direct Costs for Building, Supplies, and Equipment		
Family Practice Center	$ 19,700	
Medical Education Department	15,880	
Total		$ 35,580
Indirect Costs		$ 17,555
Gross Cost		$420,620
Less: Revenue		231,015
Net Cost		$189,605

costs are based on actual expenditures which are facts.

The benefits of the family-practice residency are,

for the most part, subjective in nature and are not conducive to a formal matrix analysis against the costs identified earlier in the study. It must be recognized that many of the benefits identified in this study are estimates or probabilistic in outcome because to substantiate each would require a myriad of separate studies.

There are many beneficiaries to a graduate medical education program in family practice. Benefits accrue to patients, to the resident, to students in nursing and other paramedical fields, to hospital physicians, to the hospital, and the community which it serves. People who have been fortunate enough not to need the hospital or physician in the role of a patient may also benefit.[16]

One noteworthy benefit of the family-practice residency program is education itself.[17] The most powerful force for the continuing education of the medical staff is an intern or resident. No planned program of lectures, conferences, or films can inspire continued learning by medical staff members equal to the stimulus set in motion by the house staff who are a potential source of searching and revealing questions.[18] A good training program may, in fact, cause the medical staff to raise its standards. Family-practice residencies such as the one at St. Joseph's provides an excellent

opportunity for contributions to patient education which can benefit everyone concerned.

As residents rotate through the various departments of the hospital, they are increasing the productivity of the attending physicians. This educational regimen can provide a great deal of stimulus to the quality and discipline of patient care. Teaching programs in family practice affect the prestige and service to the community, as well as a positive affect on the quality of inpatient and outpatient services provided.[19]

The costs of the residency program identified earlier in this chapter are an investment by St. Joseph's to attract and retain a continuing supply of physicians to South Central Kansas. Statistics indicate that more than half of the physicians choose to remain in the states where they receive their residency training.[20] The physician services needed in the surrounding rural areas can be facilitated by St. Joseph's family-practice program in Wichita which dominates rural South Central Kansas.

The foregoing analysis of costs does not attempt to separate the cost of education from the net cost of the service provided by the residency program. To do so would require

techniques of task analysis, time and effort analysis, or patient care equivalent studies which are beyond the scope of this study. It is extremely difficult, if not impossible, to distinguish education from service in a teaching hospital because services are provided concomitant with the education process.[21]

Even without a specific percentage breakout between what constitutes education as opposed to service, it must be recognized that the hospital does derive some cost-savings benefits from the presence of the residents in the hospital and family-practice center. Residents contribute to the delivery of health services. The absence of any family-practice residency program would most certainly result in the transfer of the center's work load to the regular outpatient department which would beget a requirement for other physicians at a higher cost than the salary and benefits paid to the residents.

Provision of the same services to the community, both in the hospital and in the outpatient clinics with hired physicians rather than residents, would result in higher replacement costs to the hospital and patients.[22]

The many intangible benefits identified in this study may outweigh the tangible costs. If the family-practice

residency program is considered desirable by the hospital as well as the community for its external benefits in terms of quantity and quality of services provided, then it may not be viewed as inefficient by the hospital or community.[23]

Footnotes

[1]Fein and Webber, p. 122.

[2]Berki, p. 461.

[3]"Family Practice Summary Report for Year 1973," St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas.

[4]Donnell interview.

[5]Personal interview with Merle D. Seibert, Controller, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 14, 1974.

[6]Personal interview with Joseph F. Heeb, Administrator, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 12, 1974.

[7]Personal interview with Margaret Conklin, Librarian, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 8, 1974.

[8]"Guidelines for Academic Medical Center Planning to Assume Institutional Responsibility for Graduate Medical Education Report of the Committee on Graduate Medical Education of the Association of American Medical Colleges," Journal of Medical Education, XLVIII (September, 1973), 789.

[9]Donnell interview.

[10]Heeb interview.

[11]Ibid.

[12]Personal interview with John Holmgren, Assistant Administrator, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 13, 1974.

[13]"Detail Supporting Income and Expense Statement," St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, FY 1973.

[14]Ibid.

[15]Horngren, p. 341.

[16]Carroll, p. 139.

[17]Donnell interview.

[18]Eisolo Wesly, ed., The Medical Staff in the Modern Hospital (New York: McGraw-Hill Book Co., Inc., 1967), p. 361.

[19]Roland J. Knobel and Beaufort B. Longest, "Problems Associated with Cost Benefit Analysis Techniques in Voluntary Hospitals," Hospital Administration, XIX (Winter, 1974), 49.

[20]Judy Graves, ed., The Future of Medical Education (Durham, N.C.: Duke University Press, 1973), p. 11.

[21]Woodbury Perkins, "Service Aspects of Health Education," Journal of the Association for Hospital Medical Education, VI (First Quarter, 1973), 5.

[22]Ibid., p. 6.

[23]Berki, p. 79.

CHAPTER III

CONCLUSION

Summary

St. Joseph Hospital is a multiproduct institution. It is a provider of health care, but it is also involved in the important task of graduate medical education. The former is a quantifiable, here-and-now service, but the latter is difficult to quantify because the line between patient care and medical education is a fine one.

Family-practice residency graduates represent a new generation of flexible, innovative physicians who can make a significant contribution to the growth of a more responsive system of medical education and health care.[1] However, the transition from medical school to a practitioner of family medicine in the form of a residency program is indeed costly, as demonstrated in this study.

The total or gross cost of the family-practice residency program at St. Joseph Hospital for 1973 was $420,620. For the same period of time, revenue generated for the hospital by the family-practice center amounted to $231,015. Therefore, the net cost of the program for 1973 was $189,605.

The value of graduate medical education, in light of these costs, is not immediately visible and it may not become fully apparent for some time.[2] The value of St. Joseph's residency program in family practice cannot be analyzed solely on the basis of cost. The benefits identified in this study must also be taken into consideration, since patient care and graduate medical education have different values or rates of return to the hospital and the community.

As pointed out earlier in the study, many of the benefits to graduate medical education are subjective in nature and therefore difficult to quantify. This does not, however, lessen their importance. The family practice residency program at St. Joseph Hospital provides additional medical resources for delivery of health services and patient education which benefits the hospital and the community. This program is also a mechanism for attracting and retaining physicians to practice in Wichita and its surrounding communities. The regimen of graduate medical education can raise the quality and discipline of inpatient as well as outpatient care. In addition, the rotation and inservice work by the residents exerts a positive influence on the continuing education of the hospital's medical staff and can also increase

the productivity of the medical staff.

In evaluating these benefits and the aforementioned costs, it should be remembered that while economic efficiency may be subordinated to clinical or educational requirements, there is a limit to the economies of scale for the hospital and the community.

This study identifies the direct, indirect, gross, and net costs of St. Joseph's family-practice residency program for a one-year period. In an analysis of these costs, one is not justified in attributing all of the gross cost of the program to education, since a significant amount of direct patient care and ancillary services are provided to the community. The disparity between gross costs and net costs indicates that the residents in the family-practice center are generating revenue for the hospital.

The direct costs for residents' salaries and fringe benefits constitute a major portion of the total cost of the program. Any subsequent expansion of the program in terms of resident spaces will increase the cost of the program significantly. Most of the financial support for the residency program is currently derived from patient revenues.

A one-time study of costs is not adequate. Accurate

knowledge of residency costs must be available on a continuing basis for planning and decision-making purposes. Considerably more information could be gleaned from annual cost comparisons and the isolation of spiraling costs and specific expenses incurred as the result of the family-practice residency program.

Recommendations

It is recommended that:

1. The hospital implement an internal accounting system by which all costs of the program are identified and budgeted for on an annual basis. This would permit hospital personnel to monitor costs and annually evaluate the program in an orderly and realistic manner.

2. Information contained in this study and data provided as a result of the first recommendation be utilized in negotiating reimbursements and/or obtaining financial support for the program.

Footnotes

[1]"Highlights of COTH Survey," p. 1041.

[2]John G. Freymann and John K. Springer, "Cost of Hospital Based Education," Hospitals, XLVII (March 1, 1973), 65.

APPENDIX A

OBJECTIVES OF FAMILY PRACTICE RESIDENCY

OBJECTIVES OF FAMILY PRACTICE RESIDENCY

The Family Practice Residency Program at St. Joseph Hospital has been developed in terms of the following objectives:

1. To increase the number of family practitioners for south central and rural areas of the state of Kansas, medically needed;
2. To train residents in office efficiency as solo or clinic practitioners;
3. To emphasize the need for the Problem Oriented approach in general medicine;
4. To develop newer innovative methods of meeting comprehensive health care needs of a family practitioner through increased use of technology and allied health manpower;
5. To make it possible to rotate through all specialty services in order to develop an in-depth, studied approach in the practice of medicine rather than a mechanical, traditional approach;
6. To develop a continuum of health care for a practice which will offer comprehensiveness in all phases of medicine: preventive, acute, convalescent, and rehabilitative.
7. To provide a training opportunity for the resident in non-typical training environments, such as the rural and underserved areas.
8. To develop motivation in the resident and to develop, within his own framework, a zeal for the best possible practice of medicine, whether he eventually becomes solo or clinic based.

Source: Private interview with James M. Donnell, Director of the Family Practice Residency Program, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, March 11, 1974.

APPENDIX B

OPERATING STATISTICS, YEAR ENDING SEPTEMBER 30, 1973

OPERATION STATISTICS,
Year Ending September 30, 1973

	1972	1973
Inpatient		
Admissions	16,969	17,901
Number of Patient Days	126,372	132,110
Percentage of Occupancy	78.24	82.20
Outpatient		
Outpatient Visits	52,297	60,330
Outpatient Procedures	141,746	152,748
Emergency Room Visits	27,411	29,451
Family Practice Center		
Professional Visits	5,451	9,576
Laboratory Procedures	--	1,192
EKG Readings	--	60

Source: "Detail Supporting Income and Expense Statement," St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, FY 1973: "Family Practice Summary Report for year 1973" St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

American Medical Association. "Essentials of an Approved Residency in Family Practice." Director of Approved Internships and Residencies. Chicago: American Medical Association, 1973.

_____. "The Graduate Education of Physicians." The Report of the Citizens Commission on Graduate Medical Education. Chicago: American Medical Association, 1966.

Berki, Sylvester E. Hospital Economics. Lexington, Mass.: Lexington Books, 1972.

Berman, Howard J., and Weeks, Lewis E. The Financial Management of Hospitals. Ann Arbor: Bureau of Hospital Administration, University of Michigan, 1971.

Campbell, Thomas J. Program Cost Allocation in Seven Medical Centers: A Pilot Study. Evanston, Ill.: Association of American Medical Colleges, 1969.

Dearden, John. Cost Accounting and Financial Control Systems. Reading, Mass.: Addison-Wesley Publishing Co., 1973.

Fein, Rashi. The Doctor Shortage: An Economic Analysis. Washington, D.C.: Brookings Institution, 1967.

_____, and Weber, Gerald I. Financing Medical Education: An Analysis of Alternative Policies and Mechanisms. New York: McGraw-Hill Book Co., Inc., 1971.

Gerber, Alex. The Gerber Report. New York: David McKay Co., Inc., 1971.

Graves, Judy, ed. The Future of Medical Education. Durham, N.C.: Duke University Press, 1973.

Horngren, Charles T. Accounting for Management Control. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

Kimmich, Homer M., ed. Innovations in Medical Education: The Springfield Conference. Edwardsville, Ill.: Southern Illinois University Press, 1971.

Knowles, John H., ed. Views of Medical Education and Medical Care. Cambridge: Harvard Press, 1968.

McGibony, John R. Principles of Hospital Administration. 3d ed. New York: Putnam's Sons, 1969.

Mumford, Emily. Interns: From Students to Physicians. Cambridge, Mass.: Harvard Press, 1970.

Smalley, Harold E., and Freyman, John R. Hospital Industrial Engineering. New York: Reinhold Publishing Corp., 1966.

Wesly, Eisolo, ed. The Medical Staff in the Modern Hospital. New York: McGraw-Hill Book Co., Inc., 1967.

Reports

American Medical Association. Meeting the Challenge of Family Practice, Council on Medical Education. Report of the Ad Hoc Committee on Education for Family Practice. Chicago: American Medical Association, September, 1966.

_____. Report on Physician Manpower and Medical Education. Chicago: American Medical Association, 1971.

Higher Education and the Nation's Health. Report by the Carnegie Commission on Higher Education. New York: McGraw-Hill Book Co., Inc., 1970.

Millis, John S. A Rational Public Policy for Medical Education and Its Financing. New York: National Fund for Medical Education, 1971.

Articles and Periodicals

"Analysis of Program Costs of Academic Health Centers." Journal of Medical Education, XLVIII (September, 1973), 793.

Baker, Collin. "What's Different About Family Medicine?" Journal of Medical Education, XLIX (March, 1974), 229-33.

Busby, Daniel D.; Leming, James C.; and Olsen, Merlin I. "Unidentified Educational Costs in a University Teaching Hospital: An Initial Study." Journal of Medical Education, XLVII (April, 1972), 243-53.

Carroll, Augustus J. "Medical Education Costs in Hospitals, Part 2." Journal of Medical Education, XL (November, 1965), 137-41.

_____. Program Cost Estimating in a Teaching Hospital: A Pilot Study. Edited by Thomas J. Campbell and Mary H. Littlemeyer. Evanston, Ill.: Association of American Medical Colleges, 1969.

Freymann, John G., and Springer, John K. "Cost of Hospital Based Education." Hospitals, XLVII (March 1, 1973), 65-74.

"Guidelines for Academic Medical Centers. Planning to Assume Institutional Responsibility for Graduate Medical Education. Report of the Committee on Graduate Medical Education of the Association of American Medical Colleges." Journal of Medical Education, XLVIII (September, 1973), 779-91.

"Highlights of COTH Survey of House Staff Policy, 1973." Journal of Medical Education, XLVIII (November, 1973), 1031-34.

"Implications of Academic Medical Center Taking Responsibility for Graduate Medical Education: Report by the AAMC Ad Hoc Committee on Graduate Medical Education." Journal of Medical Education, XLVII (February, 1972), 77-84.

Knobel, Roland J., and Longest, Beaufort B. "Problems Associated with Cost Benefit Analysis Techniques in Voluntary Hospitals." Hospital Administration, XIX (Winter, 1974), 42-52.

Maysent, Harold W. "Health Education Costs in a Community Hospital." Journal of the Association for Hospital Medical Education, VI (First Quarter, 1973), 1-4.

Perkins, Woodbury. "Service Aspects of Health Education." Journal of the Association for Hospital Medical Education, VI (First Quarter, 1973), 5-7.

Snoke, Albert W. "Critique of the Study." Program Cost Estimating in a Teaching Hospital: A Pilot Study. Edited by Thomas J. Campbell and Mary H. Littlemeyer. Evanston, Ill.: Association of American Medical Colleges, 1969.

Private Interviews

Bohrer, John. St. Joseph Hospital and Rehabilitation Center, Wichita Kansas. Personal interview, March 4, 1974.

Conklin, Margaret. Librarian, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas. Private interview, March 8, 1974.

Donnell, James M. Director of Family Practice Residency, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas. Personal interview, March 11, 1974.

Heeb, Joseph F. Administrator, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas. Private interview, March 12, 1974.

Holmgren, John. Assistant Administrator, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas. Private interview, March 13, 1974.

Seibert, Merle D. Controller, St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas. Private interview, March 14, 1974.

Other Sources

American Academy of General Practice, Commission on Education. Graduate Education for Family Practice. Kansas City, Mo.: American Academy of General Practice, April, 1969.

Association of American Medical Colleges. Report of the Committee on the Financing of Medical Education. Evanston, Ill.: Association of American Medical Colleges, October, 1973.

"Detail Supporting Income and Expense Statement." St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas, FY 1973.

"Family Practice Summary Report for Year 1973." St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas.

ABSTRACT

A STUDY TO IDENTIFY THE COSTS AND BENEFITS OF THE FAMILY-PRACTICE RESIDENCY PROGRAM AT ST. JOSEPH HOSPITAL AND REHABILITATION CENTER, WICHITA, KANSAS

A Problem-Solving Thesis Submitted to the Faculty of Baylor University in Partial Fulfillment of the Requirements for the Degree of Master of Hospital Administration

by
Major Bill F. Bulla, MSC

August 1975 60 Pages

A copy of this document may be obtained from University Microfilms, University of Michigan, Ann Arbor, Michigan 48108.

This study was designed to identify the costs and benefits of the family practice residency program at St. Joseph Hospital and Rehabilitation Center, Wichita, Kansas.

A review of current medical education literature, collection of financial cost data, and interviews with hospital personnel were conducted in the problem area. Elements of direct and indirect costs were identified and calculations were derived for the annual net cost of the program. Benefits of the residency program were set forth.

The direct costs for residents' salaries and fringe benefits constituted a major portion of the total cost of the program. The residency program at St. Joseph's provided a significant amount of service for the hospital in the form of direct patient care.

Recommendations were made as follows: (1) an internal accounting system be implemented whereby all costs of the program are identified and budgeted for on an annual basis; (2) information contained in the study and data derived from the first recommendation be utilized in negotiating reimbursements and obtaining financial support for the program.