

# Inhospital Family Practice— A One Year Summary

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A review of 914 medical records of patients hospitalized at the Polyclinic Medical Center of Harrisburg by members of the Department of Family Practice is presented. The age distribution of these patients was essentially bimodal, with peak numbers in the less than one year and greater than 65 years age groups. Physicians and physician groups which perform obstetrics rendered hospital care to a larger number of infants than those not performing obstetrics. The family physicians gave hospital care for a large number of different conditions. The family physicians frequently consulted other medical specialists, especially cardiologists and general surgeons. The consultation rate varied considerably among the physicians studied.

One of the initial tasks facing the developing specialty of family practice has been the definition of the content of family practice. This is particularly important in designing curricula for residency training programs. However, while the content of ambulatory family practice has been partially defined, there has been as yet very little literature describing the content of "inhospital" family practice. To date most of the studies have been of a general nature and do not describe the problems related to specific specialties.<sup>1,2</sup> In addition, most of these studies are from urban locations or university centers. The types of problems of patients who are hospitalized in smaller general and community hospitals have not been well described.<sup>3,4</sup>

Only recently have attempts been made to more fully describe the character of hospital family practice.<sup>5,6</sup> These, however, reflect the experience of a single practitioner and a partnership.

In order to define further the content of family practice, to refine the inhospital curriculum objectives for the family practice residency program, and to aid in planning for a new hospital service, a review of all the admissions to the Polyclinic Medical Center by the members of the Department of Family Practice for one year, July 1, 1976, to June 30, 1977, was performed.

## Methods

The medical records of 914 patients were reviewed by a registered nurse and the following information was recorded: age, sex, marital status, race, admitting diagnoses, discharge diagnoses, length of stay, type of payment, and the number and kinds of consultations. The diagnoses were coded according to the International Classification of Health Problems in Primary Care (ICHPPC).<sup>7</sup>

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Table 1. Rank Order by Percentage of Study Population

Rank	Designation	Number of Patients	Percent of Study Population
1	Partnership A	330	36.1
2	Group B	198	21.7
3	Group C	89	9.7
4	Partnership D	75	8.2
5	Physician E	63	6.9
6	Physician F	59	6.5
7	Physician G	42	4.6
8	Physician H	35	3.8
9	Physician I	23	2.5
<b>Totals</b>		914	100

Table 2. The Ten Most Frequent Specific Discharge Diagnoses

Diagnosis	Number
1. Artherosclerotic heart disease	153
2. All perinatal morbidity and mortality conditions	140
3. Normal newborn	120
4. Normal delivery	109
5. Diabetes mellitus	103
6. Heart failure, right sided and/or left sided	78
7. Chronic ischemic heart disease	77
8. Hypertension with involvement of target organs	73
9. Cerebrovascular disease, including stroke	67
10. All other heart diseases	51
<b>Total</b>	971

## Results

Of 15,601 hospitalized patients treated by the Polyclinic Medical Center staff physicians during the period of study, 6.1 percent (950 patients) were under the care of members of the Department of Family Practice. This represents a total of 950 family practice patients hospitalized during the one year period of study. Medical records of 914 of these 950 patients were reviewed.

Table 1 shows the rank order of the 16 physicians and physician groups according to the percentage of the total study group. These 16 physicians work in solo practice, partnership, and groups of three or four. For reasons of anonymity,

the physicians (and physician groups) were arbitrarily given alphabetical designations based on this ranking.

The age/sex distribution of these patients is quite interesting. It is essentially bimodal with the largest percentage occurring in the extreme age groups. On the average, 24.6 percent of the entire study population was less than one year of age while 29.2 percent of this group was 65 years or older. There are important differences in the patients' age and sex distribution among the physicians and physician groups in this report. Some physicians or groups, for example E and I, see very few children but large numbers of elderly patients. In fact, 87 percent of the patient popula-

Table 3. Summary of Types and Numbers of Consultations in Rank Order by Frequency

Type of Consultation	Physician(s)/Group									Totals
	A	B	C	D	E	F	G	H	I	
Cardiology	16	16	10	5	3	1	1	2	1	55
General Surgery	15	9	6	3	7	1	2	2	—	45
Gastroenterology	16	6	4	4	3	—	—	1	—	34
Physical, Medical, and Rehabilitation	12	14	2	1	—	—	—	1	3	33
Cardiovascular and Thoracic Surgery	3	10	2	—	—	—	—	1	—	26
Orthopedics	8	3	3	3	3	—	—	2	3	25
Neurosurgery	2	11	4	1	—	—	6	—	—	24
Internal Medicine	2	1	1	1	7	—	2	5	—	19
Pulmonary	6	5	—	2	2	3	—	1	—	19
Urology	2	4	1	1	2	3	—	3	2	18
Hematology and Oncology	5	3	2	2	2	—	3	—	—	17
Obstetrics and Gynecology	1	7	—	—	—	1	5	—	—	14
Psychiatry	1	2	2	4	—	—	3	1	—	13
Neurology	2	6	1	2	—	—	—	2	—	13
Radiology	1	2	1	2	1	2	1	—	—	10
Pediatrics	4	3	1	2	—	—	—	—	—	10
Ophthalmology	2	3	1	1	—	—	1	—	1	9
Renal	5	1	—	—	1	—	1	—	—	8
Oral Surgery	—	1	—	1	2	—	1	1	2	8
Podiatry	1	1	1	—	—	1	3	—	—	7
Ear, Nose, and Throat	1	3	—	—	2	—	—	—	—	6
Dermatology	—	1	—	1	—	—	—	—	1	3
Plastic Surgery	—	1	—	—	—	—	—	—	—	1
Other	—	2	—	1	—	3	3	—	—	9
	105	115	42	37	35	15	32	22	13	426

tion of physician I was in a 65+ years age group. Other physicians or groups (for example F and A) saw large numbers of children but comparatively fewer elderly patients. Other physicians and physician groups were intermediate between these two extremes. One physician group (physician group A) had a notably higher proportion of patients in the 25 to 44 year age category. On further examination the majority of patients for physician group A in the 25 to 44 year age category were females; this physician group also performed obstetrics during the period of study.

Cardiovascular Disease was the most common category of admission diagnosis. The second most

common ICHPPC category for admission diagnosis was the Supplemental Classification XVIII. This category includes a subdivision on maternal and child health which includes pregnancy and prenatal care. The third most frequent admission diagnostic category was XV—Perinatal Morbidity and Mortality. The large numbers of perinatal morbidity codes can be explained by the occurrence of multiple codes for a single infant. This category included *all* types of perinatal morbidity including such findings as erythema toxicum, hip clicks, small for gestational age, and large for gestational age. These categories are followed in rank order by Category VIII (Diseases of the Respira-

**Table 4. Consultation Rates for the Individual Physicians and Physician Groups**

Partnership A	31.8
Group B	58.1
Group C	47.2
Partnership D	49.3
Physician E	55.6
Physician F	25.4
Physician G	76.2
Physician H	62.9
Physician I	56.5
Departmental Mean	51.4

tory System), Category XVI (Physical Signs, Symptoms, and Ill-Defined Conditions), Category III (Endocrine, Nutritional, and Metabolic Diseases), and Category IX (Diseases of the Digestive System).

Table 2 lists the ten most frequent specific discharge diagnoses. These diagnoses are either diseases or specific disease groupings, such as cardiovascular disease. The numbers indicate the number of patients with these specific diseases or specific disease groupings. The total number of patients (894) with these ten most frequent diagnoses is shown. However, a single patient could have accounted for more than one code.

The importance of cardiovascular diseases in the hospital practice of a family physician is emphasized in Table 2. The single most common discharge diagnosis was arteriosclerotic heart disease; furthermore, heart failure, chronic ischemic heart disease, hypertension, and all other heart diseases also appear on this list of the top ten discharge diagnoses. A closely related specific discharge diagnosis, cerebrovascular disease (including stroke), ranks ninth in overall frequency of specific discharge diagnoses.

Table 2 also emphasizes the importance of obstetrics in the practice of these family physicians during the period of this study. Three of the four most frequent specific discharge diagnoses were obstetrical and neonatal diagnoses. The second most frequent specific discharge diagnosis

was all perinatal morbidity and mortality conditions. This category included *all* types of perinatal morbidity conditions including such findings as erythema toxicum, hip click, small for gestational age, and large for gestational age. The large numbers of perinatal morbidity codes can also be explained by the occurrence of multiple codes for a single infant.

The mean length of stay for patients hospitalized by members of the Department of Family Practice at the Polyclinic Medical Center was 9.26 days. There was a range of stay from 1 to 49 days. There was considerable variability among the different physician groups, with a mean length of stay ranging from 6.54 days for physician F to the longest mean length of stay for physician I of 14.8 days. There was also considerable variation between these two extremes.

Table 3 summarizes the numbers and kinds of consultations obtained by the members of the Department of Family Practice in caring for the 914 patients included in this study. The types of consultations are rank ordered according to frequency. The single most frequently obtained consultation was cardiology. General surgery was the most frequently requested surgical consultation; it ranked second overall in frequency.

Table 4 exhibits a consultation rate for the nine individual physicians and physician groups. Rough consultation rates were calculated by taking the total number of consultations obtained by the

physicians and physician groups and dividing by the total number of patients hospitalized by the physician or group. There was a considerable range of overall consultation rates: from 25.4 percent to 76.2 percent. The departmental mean consultation rate was 51.4 percent.

## Discussion

The 914 hospitalized patients reported in this paper represent 96.2 percent of the 950 patients cared for by the members of the Department of Family Practice at the Polyclinic Medical Center during the period of study (July 1, 1976, through June 30, 1977). The total patient group admitted to Polyclinic Medical Center by these members of the Department of Family Practice is 6.1 percent of the total patients hospitalized at Polyclinic Medical Center during this period. This 6.1 percent of the total hospitalized patients was under the care of 16 family physicians arranged in groups varying from two to four members, and also solo practitioners. Collectively, these 16 family physicians represent approximately ten percent of the total active medical staff of the Polyclinic Medical Center.

The age distribution of these patients is interesting. It is essentially bimodal with the largest percentage occurring in the extreme age groups. On the average 24.6 percent of the entire study population was less than one year of age, while 29.2 percent of the entire study population was 65 years or older. In a nationwide study of discharges by all specialty groups from over 1,800 US nonfederal, short-term hospitals, Ward reported 21.5 percent to be for patients 65 years old or older.<sup>4</sup> Generally, the smallest percentages of distribution occur in later childhood and the middle and late adolescent years, when serious illness and hospitalization are less likely.

The lowest average length of stay for patients of the individual physicians and physician groups appears to be related to the age distribution of their hospitalized patients. The lowest percentage occurred in the physician F group where 50 percent of the hospitalized patients were less than one year of age (presumably mostly newborn), while the highest average length of stay occurred in the physician I group where 87 percent of the patients

were 65 years or older. Furthermore, the patients of the two physicians who performed obstetrics during the period of study had an average length of stay at or below the departmental mean length of stay. Presumably, these low length of stay averages reflect a shorter hospital stay associated with obstetrical and newborn care, which typically is only three to five days.

Consonant with the large number of cardiological diagnoses, the single most frequently obtained consultation was cardiology. Consultation with cardiothoracic surgeons was the fifth most common consultation. There appeared to be no consistent significant differences among the individual specific types of consultation.

There was a considerable range of overall consultation rates: from 25.4 percent for physician F to 76.2 percent for physician G. The performance of obstetrics did not seem to appreciably affect the consultation rate since, of the two major groups performing obstetrics during the period of study, partnership A had a consultation rate below the departmental mean while group B had a rate slightly higher than the departmental mean. This study indicates that the Department of Family Practice is a rich source of consultations, 51 out of every 100 patients hospitalized by the Department of Family Practice being seen in consultation by another specialty or subspecialty physician.

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