Impact of Medicare on the Organization of Community Health Resources

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One phase of a follow-up study of the effects of Medicare on health services to the elderly in a Midwestern, metropolitan community is reported. The original study, covering 1966 to 1968, reported almost no change in the organization and delivery of health services in five midwestern study sites. This study was conducted in 1971-72 (1) to re-examine the attitudes of managers of community health resources to Medicare-related decisions about coordinating their services; and (2) to assess any changes in physicians' attitudes to Medicare and their health care practices for elderly patients.

Medicare has not appreciably changed the organization of health care services. Specifically, (1) most physicians had not altered methods of practice although they explicitly recognized the need for other levels of care; (2) hospital administrators reported that few plans made in 1966-67 to expand facilities and services had been carried out and that no further Medicare-related change in services was contemplated; (3) nursing home beds increased, but ECF beds declined. There was no coordination between nursing homes and hospitals, although some hospitals affiliated with ECFs; (4) home health services increased rapidly but Medicare-reimbursed services declined after 1969; and (5) a minority of providers found the local CHP agency effective; many did not know it existed.

The importance of these findings for pending health care legislation is discussed.

This paper reports on one part of a follow-up investigation of the impact of Medicare on the provision of health care services in five midwestern communities. The initial study, conducted from 1966 to 1970, was a "before-after" study of Medicare-related changes in the provision of health services in these communities and the utilization of those services by elderly residents (Coe et al., 1970). The initial investigation pursued parallel lines of inquiry; one a study of community health resources and their organization—hospitals, nursing homes, home health services, physicians, and

other manpower sources. The other was a study of the attitudes and utilization patterns of older persons through a household interview survey of more than 2,000 people aged 60 and over. Data on elderly residents were gathered in 1966, at the time the Medicare program began, and 1968, after the program had been operating for two years. Independent but comparable samples were drawn for the two surveys. Data on the communities were drawn from interviews with directors and administrators of community facilities, interviews with a sample of practicing physicians, and from secondary sources such as census reports and publications from official agencies of organizations.

The findings for the relatively short period from 1966 to 1968 indicated: (1) there was virtually no planned coordination of health care facilities in any of the communities studied; (2) Medicare was used as a justification for expanding short-term acute-care capacities of hospitals; (3) the program had little effect on the way in which doctors practice medicine, but broadened the doctor's role in the health care scheme; and (4) Medicare had legitimated and encouraged some expansion of a needed service—home health care. During the first two years of the Medicare program, very little change was observed in provision of services by community groups or in utilization of these services by older people whether eligible for Medicare benefits or not. In general, there had been little alteration in the Medicare program itself from 1966-68 or in other systems which might affect the delivery of health services to the elderly.

The follow-up survey was started in 1971. The specific objectives were to (1) re-examine the attitudes of managers of community health resources (hospitals, nursing homes, extended care facilities, home health agencies) with respect to decisions relevant to Medicare about coordinating services provided by their organizations and (2) assess the degree of change in attitudes toward the Medicare program and health care practices for elderly patients of physicians working in the communities. Another part of this study, to be reported elsewhere, concerned an evaluation of the effects of Medicare on utilization of community health services by representative samples of older people in each of the study communities.

The Intent of the Medicare Legislation

Any effort to evaluate the impact of a major piece of social legisla-

tion such as Medicare requires some understanding of the situation that existed prior to its enactment, the nature of the program instituted under the legislation, and the alterations that have taken place since the program's start. Prior to the enactment of the 1965 amendments to the Social Security Act, disproportionate numbers of the aged were classified as having inadequate incomes. The situation was compounded by the higher prevalence of chronic diseases among the aged and the resultant increased need for medical care services. The composite picture of the aged thus produced was of a group both more in need of medical care services than other segments of the population and in more difficult economic circumstances for meeting the costs of this care. The 1965 amendments to the Social Security Act provided the legislative authority for what is commonly called "Medicare," which was designed to relieve the financial burden of health care costs on the aged population and to remove the relationship of use of health services to income.

Some aspects of the program were intended to stimulate or reinforce development of services and facilities considered medically necessary or potentially less costly, e.g., home health services and extended care facilities. However, there was no explicit intent to alter the traditional system of fee-for-service medicine. The program provided a guarantee of payment for certain hospital and medical services furnished to a population group which previously could not always pay its medical care bills. As such, the program could have been considered a support for the existing medical care system with little incentive for provision of more efficient and effective medical care for the aged population. Nevertheless, there was an implicit intent to use this mechanism to improve the distribution of needed services to the aged and to upgrade the quality of medical care available to this population group by stimulating development of intermediate levels of care, improving access to services, and encouraging cooperation among the various providers in the community.

Study Objectives

The over-all focus of this study as noted above was to evaluate the impact of the Medicare program on the provision of health care services in our study communities.

In the United States, the orientation toward treatment of disease rather than promotion of health focuses on acute-care services

TABLE 1

Population Characteristics of Kansas City—1970

City & County	Total Population 1970	% Urban	Pop. 65+		Pop. 75+		Dependency Ratio	Index of Aging	Median Age	Sex Ratios		% Nonwhite	% Foreign Stock
			Number	%	*Number*	%				*Total*	*Pop.65+*		
KC Metro Area (6-county area)	1,253,916	91.6	117,158	9.3	46,256	3.7	62.8	31.9	28.1	92.1	65.4	12.1	5.9
U.S.	203,211,926	73.5	20,065,502	9.9	7,630,046	3.8	62.2	34.6	28.1	94.8	72.2	12.5	16.5

Source: U.S. Bureau of the Census 1970, Series PC(1)C.

$$\text{Dependency ratio} = \frac{\text{Age group 0–14} + \text{Age group 65+}}{\text{Age group 15–64}}$$

$$\text{Index of aging} = \frac{\text{Age group 65+} \times 100}{\text{Age group 0–14}}$$

Sex ratio = Number of males per 100 females.
Foreign stock = includes foreign born and native born of foreign or mixed parentage.

from the United States figures, with Kansas City having almost 92 percent of its population urban.

Kansas City also does not differ much from the total U.S. averages on social and economic indicators such as educational achievement, occupational distribution in manufacturing and industry, government workers, or "white collar" jobs (refer to Table 2). However, Kansas City residents have a smaller proportion with incomes under the current poverty level and more with incomes over $15,000. Therefore, the median family income level $10,500 is slightly greater for the Kansas City area (by about $1,000). In sum, the socio-demographic characteristics of Kansas City are not particularly different from national patterns.

Physician Services

Trends in development of services by health facilities in a community ought to be associated with trends in utilization by the population. The data for Kansas City on use of doctors, hospitals, nursing homes, and home health services, as we shall see, generally meet this expectation. There are, however, some discrepancies which need elaboration and explanation, particularly with regard to *perceived* utilization on the part of the providers. All the data reported below are taken from interviews with providers, except for the brief comment on physician visits which includes data reported by respondents in the household survey.

The entry point to a community's formal health system, of course, is the practicing doctor who, by tradition and by law, must initiate any therapeutic process. In 1970 there were about 1,600 physicians in active practice in the six-county area (refer to Table 3). This is a rate of 1.28 physicians for every 1,000 people, about the national average. It is important to note, however, that while the absolute number of active physicians increased slightly over 1965, the physician/population ratio dropped from 1.30 per 1,000. Including osteopaths in the physician manpower pool, the decline over the five-year period was even more significant: from 1.51 physicians per 1,000 population to 1.44. Further, between 1965 and 1970 the proportion of general practitioners among active physicians dropped from 18.4 percent to 13.2 percent with the decrease accounted for by an increase in the proportion of medical specialists. There was little change in proportion of surgical specialists or hospital-based specialists.

TABLE 2

Selected Social and Economic Characteristics of Kansas City—1970

City & County	Nonworker/ Worker Ratio [a]	Employment Composition: % in Mfg. Industry	% in White Collar Industry	% Government Workers	Farming Managers Laborers & Foreman
K.C. Metro Area (6-county)	1.30	22.7	53.7	14.6	.9
U.S.	1.45	25.9	48.2	16.1	N.A.

Source: U.S. Bureau of the Census 1970, Series PC(1)-C.
[a] Ratio of persons not in labor force, including persons under 14, to persons in labor force. Compare with Productive Workers Index of 1960—Table A-4 in previous report.

Selected Social and Economic Characteristics of Kansas City—1970

	INCOME OF FAMILIES				POPULATION 65+			
					Inmates of Home for Aged		Incomes below Poverty Level	
CITY & COUNTY	Median Income (Families)	% with Incomes below Poverty Level	% with Incomes of $15,000+	Median School Year	*No.*	*% 65+*	*No.*	*%*
K.C. Metro Area (6-county area)	$10,568	6.9	23.0	12.3	4,901	4.2	26,126	22.3
U.S.	9,590	10.7	20.6	12.1	927,514	4.6	2,595,498	25.9

Source: U.S. Bureau of the Census 1970, Series PC(1)-C.

TABLE 3

Kansas City Physician Data—1965 and 1970

	M.D.'s										Active M.D. Rate/1000 Total Pop.	M.D. & D.O. Rate/1000 Total Pop.
	Total Active (In Patient Care)		General Practitioners		Medical & Other Specialties		Surgical Specialties		Hospital Based Activity			
City & County	*No.*	%	*No.*	%	*No.*	%	*No.*	%	*No.*	%		
1970												
K.C. Metro Area (6 counties)	1,603	100.0	212	13.2	532	33.3	392	24.4	467	29.1	1.28	1.44
U.S.											1.26[a]	1.32[a]
1965												
K.C. Metro Area (6 counties)	1,547	100.0	284	18.4	430	27.8	373	24.1	460	29.7	1.30	1.51
U.S.											1.25[a]	1.27[a]

Sources: Distribution of Physicians, Hospital and Hospital Beds in the U.S., 1970. American Osteopathy Association Yearbook and Directory, 1970.
[a] *Additional source:* Health Resource Statistics, 1970.

TABLE 4

Office and Hospital Visits per Week
Reported by Kansas City Physicians—1971

	No. of Visits							
	None	*1–50*	*51–100*	*101–150*	*151–200*	*201+*	*NA*	*Total*
% office visits (N = 55)	1.8	32.4	39.6	14.4	5.4	1.8	3.6	100.0

	No. of Visits								
	None	*1–10*	*11–30*	*31–50*	*51–70*	*71–90*	*91+*	*NA*	*Total*
% hospital visits (N = 55)	9.1	1.8	16.2	19.8	19.8	5.4	16.4	10.9	100.0

TABLE 5
Percentage of Kansas City Physicians Who Perceived an Increase in Patient Visits of 65+ Since Medicare—1971

		%
Increase		45.5
No Increase		43.6
NA		10.9
(N = 55)	Total	100.0

Kansas City sample physicians (N = 55)[1] report being very busy in terms of numbers of patients seen in their offices and in the hospital. Most of them (74 percent) see 100 or fewer patients per week in their offices (refer to Table 4). One doctor in six made more than 90 visits to hospitalized patients in one week and almost half of the doctors (42 percent) made at least 50 visits to hospitalized patients during that period. This is a slightly lower level of activity, but not a significant change from a similar sample of doctors in Kansas City questioned in 1968. However, since 1968, the physicians report a perception of a higher percentage of elderly patients among their clientele, and, more importantly, more doctors now report a greater number of visits to their offices by their elderly patients. In 1968, one third of the physician-respondents thought there had been an increase in office visits by the elderly. In the 1971 sample, 46 percent of the doctors said this was the case (refer to Table 5). Interestingly, these data correspond with reports from our sample of older people only in part. That is, from 1966 to 1968, the median number of visits per person per year *declined* from 5.8 to 2.8 (most sharply toward 1968) and rose only slightly to 3.4 in 1971. Thus, after the first flush of 1966, when the program started, there was an over-all decrease in reported use of doctors in the Kansas City area by our sample of residents. This is not necessarily inconsistent with physician reports, but is not so clearly consistent as the reported increase during the last two years.

[1]Physician respondents were randomly selected from membership lists of county medical societies in the metropolitan area. Eligibility was based on being in active community practice in general practice or a specialty that treats many older patients (e.g., pediatricians, pathologists, and anesthesiologists were excluded). Over-all response rate for all communities was 80 percent. Data are not available on response rate by community.

The physician respondents were asked about their views of alternatives to prolonged hospital care and whether they ever used an ECF or home health care for their own patients. Most of them (75 percent) felt that extended care was an appropriate alternative to prolonged hospitalization because it was cheaper and freed acute beds for more appropriate patients. Almost as many (69 percent) also thought that home health care could be a good alternative to a longer stay in an acute-care setting (refer to Table 6). More than half of these respondents claim to have used extended care or home health care instead of prolonged hospitalization for their older patients (refer to Table 7). However, it should be pointed out that few of these doctors treated patients anywhere except in their private offices or in the hospitals.

In reviewing where else they saw patients, over 60 percent of the study physicians said "none" to separate questions on the number of house calls, nursing home calls, or ECF calls made during the last full work week. Almost half said they made no patient

TABLE 6
Attitudes Toward Use of ECF and Home Health Services Among Kansas City Physicians—1971 (in percentages)

	Is ECF Acceptable Alternative to Hospital?		*Is HHS Acceptable Alternative to Hospital Care?*		*Is HHS Acceptable Alternative to ECF Care?*
Yes	74.5		69.1		50.9
No	18.2		21.8		36.4
NA	7.2		9.1		12.7
Total (N = 55)	100.0		100.0		100.0
Why (Why Not)?		*Why (Why Not)?*		*Why (Why Not)?*	
Less expensive—reduce cost	30.9	Low-level care needed	21.8	Where lower-level care sufficient	21.8
More appropriate care level	20.0	Recovery at home faster	16.4	Home care not good enough	16.4
Free acute Hospital Beds	10.9	Less expensive, lower cost	10.9	Home setting good for treatment	10.9
ECF's over-utilized	10.9	Frees hospital for acute care	10.9	Home care not necessary	5.5
Not enough flexibility	9.1	Unnecessary		If Pt's condition warrants it	3.6
Economically unsound	1.8	If well enough to be home	5.5	NA	41.8
Other	7.3	Other	16.4		
NA	9.1	NA	18.1		
Total	100.0	Total	100.0	Total	100.0

TABLE 7

Use of ECF or HHS as Alternative to Hospital Care by Kansas City Physicians—1971

	Ever Used ECF as Alternative to Hosp. Care	*Ever Prescribed HHS as Alternative to Hospital*
	%	%
Yes	60.0	56.4
No	36.4	40.0
NA	3.6	3.6
Total (N = 55)	100.0	100.0

visits to any places other than those previously listed (refer to Table 8).

When asked whether Medicare had made any change in the availability of health services, 69 percent said yes, but most indicated this related to financial availability (refer to Table 9). Eighty-two percent of the physicians said Medicare had made changes in the use of services, primarily in the use of hospitals and physicians (refer to Table 10).

In response to a question on the best way to increase physician services, one third said by increasing the number of physicians. Few cited increasing the number or use of paramedics, or other changes in the structure or delivery of health services (refer to Ta-

TABLE 8

Number of House Calls, Nursing Home Calls, ECF Calls, and Visits to Other Places Last Week by Kansas City Physicians—1971

	House Calls %	*Nursing Home Calls* %	*ECF Calls* %	*Visits— Other Places* %
None	63.6	61.8	65.5	49.1
1–5	12.7	12.7	5.5	—
6+	1.8	3.6	1.8	3.6
NA	21.8	21.8	27.3	47.3
Total (N = 55)	100.0	100.0	100.0	100.0

TABLE 9

Kansas City Physician Impressions about Changes in Kind, Quality, Amount, or Availability of Health Services In the Community Because of Medicare—1971

Medicare Made Changes	%	*What Changes?*	%
Yes	69.1	Makes care financially available	30.9
No	20.0	Improved care for poor	10.9
DK	1.8	Increased expansion of facilities	9.1
NA	9.1	More use of ECF's/other alternatives	—
		New services created	—
Total (N = 55)	100.0	Other	20.0
		No changes noted	20.0
		NA	9.1
		Total	100.0

ble 11). In other words, while physicians are aware of the alternatives and express some agreement with the possibilities for coordination of services, they have not significantly altered their methods of treating patients because of the Medicare program.

Organizational Services

In the 1971 follow-up period there were 32 hospitals in the Kansas City area (down two since 1968) with a total of almost 6,300 hospital beds or 5.7 beds per 1,000 population (up from 5.3 beds per 1,000

TABLE 10

Kansas City Physician Impressions of Any Changes in Use of Health Services Made by Medicare—1971

Changes	%	*What Changes*	%
Yes	81.8	Increased use of MD's	32.7
No	9.1	Increased use of hospitals	21.8
DK	1.8	Increased use of Paramedics	—
NA	7.2	Other	25.5
		No changes noted	9.1
Total (N = 55)	100.0	NA	10.6
		Total	100.0

TABLE 11

Kansas City Physician Opinions as to the Best Way to Increase Physician Services—1971

	%
Increase number of M.D.s	32.7
Reduce paper-work, use credit cards	10.9
Don't need to increase amount of service, OK now, etc.	9.1
Change geographic distribution of M.D. services	7.3
Promote group practice	5.5
Police utilization, screen out well patients, reduce overutilization	5.5
Expand insurance coverage	3.6
Increase number/use of paramedics	1.8
No answer/doesn't apply	23.6
Total (N = 55)	100.0

population in 1966). Almost one third of the hospitals were very small (11 had fewer than 100 beds), while seven had more than 300 beds with two having more than 500 beds (refer to Table 12). Most of these (27) are voluntary, nonprofit institutions and all but two are general hospitals. Because of the two university-based medical centers, all but 14 of the hospitals claim some affiliation with one or more professional schools of medicine or nursing. Since the 1966 baseline survey, there are fewer very small hospitals and more intermediate ones (100 to 299 beds) because of expansions and closing of smaller units.

Data from the survey of the 32 Kansas City area hospitals (refer to Table 13) are also generally consistent with perceptions of physicians and the public. The admission rate to hospitals in the metropolitan area rose only slightly from 1966 to 1971 (170.6 admissions per 1,000 population to 172.6 per 1,000). However, there had been a decrease (6 percent) in admissions during the first two-year period and an increase (8 percent) since 1968. Admissions of patients age 65 or older, however, had a reverse trend. That is, in Kansas City hospitals, the proportion of aged admissions before Medicare began was 22.4 percent. This rose to 27.6 percent in 1967 and to 30.2 in 1968. Since then, however, the proportion has dropped to 26.1 percent. This would seem to suggest that some alternatives to hospitalization are being employed for the elderly, especially since 1968. A larger proportion of the Kansas City sample of residents, on the contrary, reported having been hospitalized during 1970 (25 percent) than was the case in 1968 (20 percent).

If data from the hospitals are an accurate reflection of utiliza-

TABLE 12

Provision of Hospitals Services in Kansas City—1970

	1970 Total No. Hosp. Beds	Bed Rates per 1000 Population	Bed Rates per 1000 Pop 65+	Size of Hospital by Number of Beds					Education & Research Programs				Hosp. by Total Service		
				Total Hospitals	*500+*	*499–300*	*299–100*	*99 or Less*	*Residency Program*	*Intern Program*	*Medical School Affiliation*	*Teaching Hospital*	*Up to 1/3*	*1/3 to 2/3*	*2/3 or more*
K. C. Metro Area	6,286	5.7	53.6	32[b]	2	5	14	11	8	7	4	3	15	12	2
													(3 of the hospitals didn't list services)		
U.S.		7.9[a]	80.5[a]												

Source: Guide Issue, Part 2, AHA, Aug. 1971 for year ending September 30, 1970.
[a] *Additional source:* Statistical Abstract of the U.S., 1972, p. 71–73.
[b] Specialty hospitals were excluded, such as children's, maternity, V.A.

TABLE 13

Hospital Utilization in Kansas City—1966–70

	% Pop. 65+ 1970 Census	% Inc. From 1960	Hospital Admissions [a]					% of Admissions 65+ [b]				Change in % of Adm. Pre MC–1968	Change in % of Adm. 1968–1970
			Rate Per 1000 Tot. Pop. 1966	*Rate Per 1000 Tot. Pop. 1968*	*Rate Per 1000 Tot. Pop. 1970*	*Change 1966–68*	*Change 1968–70*	*Pre-Medicare*	*1967*	*1968*	*1970*		
K.C. Metro Area	9.3	+16.3	170.6	164.1	172.6	–6.5	+8.5	22.4	27.6	30.2	26.1	+7.8	–4.1
U.S. Total	9.9	+23.8	145.9[c]	146.0[c]	152.0[b]	+.1	+6.0						

[a] *Source:* Guide Issue, Part 2, AHA, Aug. 1971, 1969, 1967, for year ending previous Sept. 30.
[b] *Source:* Hospital interviews 1968 and 1971.
[c] *Source:* Statistical Abstract

tion of ambulatory and hospital-based services, then use of alternative sources of care—ECFs, nursing homes, and home health services should have increased during this period. In the Kansas City area the number of ECFs increased from 17 in 1969 to 18 in 1971. However, hospital-based ECFs declined from three to two with 59 beds, while nursing home ECFs went from 14 to 16 with 690 beds. This represents a decline in ECF beds in both kinds of settings since 1968, almost 50 percent for hospital ECF beds and 26 percent for nursing homes (refer to Tables 14 and 15). More telling, however, is that the total number of hospital and nursing home ECF beds actually dropped from 8.8 to 6.4 beds per 1,000 persons aged 65 or over. Nevertheless, although fewer beds were available, neither kind of ECF setting had an average occupancy rate in 1971 that reached 50 percent (21 percent for hospitals and 48 percent for nursing homes (refer to Table 16). Thus, there seems to be a sizable excess of ECF-certified beds in Kansas City which are not being used, despite the decline in the number of such beds. This decline is especially significant because extended care is a concept and practice directly associated with the Medicare program. All expectations would have been for continued growth of this level of care as had been evident between 1967 and 1969.

When Medicare began there were 75 licensed nursing homes in the Kansas City area (refer to Table 17). This rose to 82 in 1969 and dropped to 80 in 1971. However, the number of beds increased from about 4,600 in 1967 to 5,251 in 1969 and more than 5,600 in 1971. Obviously, smaller homes are closing while more recently licensed homes tend to be larger (some are part of a nationwide chain). The number of beds per 1,000 persons age 65 and over (the most likely users) has more than kept pace with population growth in that age group. The bed ratio in 1967 was 41 per 1,000 older people and rose to 46 per 1,000 in 1969 and 48 per 1,000 in 1971. In the most recent survey, about 38 percent of the nursing homes had a license as a p,ofessional, skilled home, while more than half (55 percent) were licensed as practical nursing homes. The remainder were domiciliary and unlicensed county homes.

For non-ECF nursing-home beds the occupancy rate in Kansas City has remained fairly stable. In 1967 it was 85 percent on an average day; 89 percent in 1969; and 87 percent in 1971. There obviously has been no decrease in the traditional use of nursing homes.

The potential effects of a program like Medicare could be most dramatically seen in terms of home health care. Like extended care, payment for home health services was specifically provided as part

TABLE 14

Summary of Kansas City Health Resources Before and After Medicare

	Kansas City			United States		
	1965–6	*1968–9*	*1970–1*	*1965–6*	*1968–9*	*1970–1*
Total population[a]	1,201,100	1,237,132	1,253,916	195,936,000	201,422,208	203,211,926
Population 65+[a]	110,501	113,611	117,158	18,026,112	19,439,471	20,065,502
No. of hospitals	34		32			
No. beds per 1,000 pop.	5.3		5.7	8.6		7.9
No. nursing homes	78	82	80			
No. N.H. beds per 1,000 pop. 65+	38.1	46.2	48.0		47.9	NA
No. Hosp. ECF beds		117	59			
No. N.H. ECF beds		928	690			
Total No. ECF beds		1,045	749		329,621	306,998
No. ECF beds per 1,000 pop. 65+		8.8	6.4		16.9	15.3
No. home health agencies	2	7	5			
No. of M.D.'s	1,547	1,597	1,603			
No. of M.D.'s per 1,000 population	1.30	1.22	1.28	1.25		1.26
No. M.D.'s & D.O.'s per 1,000 population	1.51		1.44	1.27		1.32

[a] Figures for 1966 and 1968–69 are estimates; figures for 1970 are 1970 census figures.

TABLE 15

Extended Care Facilities of Nursing Homes in Kansas City — 1967–69–71

	NHs with ECFs		NH ECF Beds		
	Number	*% of Total Nsg. Homes*	*Number*	*% of Total NH Beds*	Rate of NH/ECF Beds per 1,000 of 65+
Kansas City					
1967	10	13.3	501	10.9	4.5
1969	14	17.1	920	17.7	8.2
1971	16	20.0	690	12.3	5.9
United States					
1967	4,154	21.7	290,893	34.4	15.6
1969	4,840	25.6	341,271	36.2	17.5
1970	4,646[a]	23.6[a]	333,078[a]	33.5[a]	16.6[a]

Source: Survey of Nursing Homes in Five Communities, Institute for Community Studies, 1967–69–71.
[a] Figures for 1970, not 1971.

TABLE 16

Comparison of Hospital and Nursing Home Extended Care Facilities in Kansas City — 1971

	K.C.	*U.S.*
Total ECF's—Number	18	4,277[a]
Hospital ECF's	2	
% of all ECF's	11.1	
Nursing home ECF's	16	
% of all ECF's in that community	88.9	
ECF Beds—Number	749	306,998[a]
Hospital ECF beds	59	
%	7.9	
Nursing home ECF beds	690	
%	92.1	
ECF Beds/100		15.3[a]
65+	6.4	15.3[a]
Average Daily Charge		
Hospital ECF's	$41.47	
Nursing home ECF's	$24.03	
Average Length of Stay (days)		
Hospital ECF's	30.7	
Nursing home ECF's	36.9	
Occupancy Rate (%)		
Hospital ECF's	21.1	
Nursing home ECF's	48.2	

Source: Survey of Nursing Homes and Hospitals, 1971, Institute for Community Studies.
[a] *Additional source:* Statistical Abstract of the U.S., 1972, p. 74 (1971 data).

of the program to promote different levels of care for older people. While some home care programs—traditional ones like Visiting Nurse Associations, health department nurses as well as hospital-based home care—were already in existence, Medicare was to provide the impetus for development of new agencies or extending services and caseloads of existing ones. The trend in the Kansas City area meets all these expectations (refer to Table 18). In 1966, before Medicare, there were two agencies. By the end of the first year (1967) there were four, and in 1971 there were five. Two of these agencies are voluntary and one each is supported by a social services agency, a health department, and a hospital. Each year since 1966 the five agencies combined have increased the total number of visits made. However, more importantly, the number of visits to patients over 65 has declined since 1970 (the peak year)

TABLE 17

Licensed Nursing Homes in Kansas City — 1967–1969–1971

	No. of Homes	*No. of Beds*	*Bed Rate per 1000 for 65+*	*Occupancy Rate — %*
Kansas City				
1967	75	4,610	41.1	85.4
1969	82	5,251	46.2	88.8
1971	80	5,627	48.0	87.4
United States				
1967			45.2	89.3
1969			47.9	90.0
1971			N.A.	N.A.

Source: Institute for Community Studies Nursing Home Surveys.

after a sharp rise from 1966 to 1968 and a slower rate of increase from 1968 to 1970. The total visits have increased from 34 per 1,000 in 1966 to 62 per 1,000 in 1971 (an 82 percent increase). However, the percentage of Medicare-reimbursed visits has declined since 1969 after a precipitous increase from 1966 to 1967 (538 percent) and a further increase of 16 percent to 1968-1969, the peak years in which almost three out of five visits (59 percent) were reimbursed by the program. In 1970 the proportion had dropped to 54 percent and by 1971, to 45 percent, a decrease of 24 percent since the peak year. This corresponds directly with the trend in rate of visits per 1,000 people age 65 or over. Before Medicare began, visits to the elderly were at the rate of 29 per 1,000. Immediately after Medicare (1967), the rate rose to 227 per 1,000. Again, the peak year was 1969 (341 per 1,000) which in 1971 had slipped to 301 per 1,000, a decrease of 12 percent from 1969 to 1971.

The implication, of course, is not that these agencies are reducing their services, but that a smaller proportion of Medicare beneficiaries are receiving them, the very clients for whom the programmed expansion was intended.

We recognize there were changes in Medicare reimbursement policies in the period in question. There was no change in the legislative definition of appropriate use of ECFs or home health services, but the Social Security Administration did apply more stringent administration standards in interpretation of justifications, with the result that determinations of approval for payment were

TABLE 18

Home Health Agencies in Kansas City: Comparative Utilization Data, 1966–71

	1966	*1967*	*1968*	*1969*	*1970*	*1971*
a. Total visits	40,556	50,417	65,982	66,228	75,279	78,787
b. Visits reimbursed—Medicare:	3,240	25,482	38,632	39,326	39,566	35,773
% Medicare visits:	8%	51%	59%	59%	54%	45%
c. Rate of total visits per 1,000 of total population:	34	41	53	53	60	62
d. Rate of Medicare visits per 1,000 of population 65+	29	227	340	341	338	301

more difficult to obtain. The "tightening-up" procedure resulted in retroactive disapprovals with negative impact on the finances of the provider agencies. However, this administrative action was based on concern for the level of total expenditures under the Medicare program and concern for whether these facilities were being used as originally anticipated. If ECFs and home health services were being used as alternatives to continued inpatient hospital care and their use was significantly reducing the length of hospital stays by transfer of patients to less expensive treatment levels, it is questionable whether a curtailment of ECF and home health service use would have been considered an acceptable means of saving Medicare funds. Under those circumstances pressure might have been applied for increased use of lower levels of treatment where appropriate, to save funds expended on more expensive hospital services.

The possibility has to be considered that the "tightening-up" on ECF and home service approvals might have resulted from, rather than caused, difficulties in providing a viable alternative to extended inpatient hospital care. That is, the medical care delivery system might not have been making appropriate use of alternative and less expensive levels of care to reduce use of hospital facilities but might have been using these services in considerable measure for patients who would have been discharged from the hospital at the same point in time in any event.

Coordination of Care

Interinstitutional or interagency cooperation among the health facilities in Kansas City does not seem to have increased significantly over the last two years, although the level of cooperation seems modestly high. For example, about six of every 10 hospitals had a formal transfer agreement with nursing home ECFs in 1968, and the same proportion was found in the 1971 survey. Few hospitals had any plans to develop their own home health service agency. Five were already in operation. However, the proportion of hospitals with a coordinator of home health services on their staffs dropped from 56 percent in 1968 to only 33 percent in the 1971 survey. Several hospitals, however, did report that representatives of the home health agencies were aided in finding recently discharged patients who might need continued assistance. About 75 percent of the hospitals have a "predischarge planning" staff

TABLE 19
Knowledge and Evaluation of Comprehensive Health Planning Agency, Kansas City (in percentages)

	Physicians	*Hospital Administrators*	*Nursing Home Operators*	*Home Health Directors*
	A. Is there a CHP Agency here?			
Yes	56	97	24	100
No	7	3	20	—
DK	37	—	56	—
	100 (N = 55)	100 (N = 32)	100 (N = 80)	100 (N = 5)
	B. Is CHP effective?			
Yes	24	44	11	—
No	22	32	7	—
DK	54	24	82	100
	100 (N = 55)	100 (N = 32)	100 (N = 80)	100 (N = 5)

person (often the patient's doctor), but, as indicated, predischarge planning includes home health care in only one case in three.

Since the 1968 survey, there was established in the Kansas City area an official comprehensive health planning agency known locally as Mid-America Comprehensive Health Planning Agency, Inc. (MACHPA). Thus, some clue to the increased coordination of health services may be inferred from data from the 1971 survey which asked about MACHPA. These data are shown in Table 19. The results are not too surprising, given that MACHPA, like most of its counterparts in the country, devotes most of its time to matters involving provision of hospital services. That is, more hospital managers were aware of the agency's existence and more rated it as doing an effective job. Operators of nursing homes, privately owned ones without ECF license, would have little direct cause for knowing about or being influenced by a CHP unit. Similarly, home health agency directors would not seem directly to be involved with hospital-oriented planning groups. However, it seems unusual that barely half of the doctors queried knew about the agency when they represented the key to initiation of formal care. Furthermore, those who knew about MACHPA were almost equally divided in their opinion of it. None of this would suggest a strong backing for an agency designed to bring about a new organization of health resources.

Effects of Medicare

Having outlined above the basic trend data on provision and utilization of selected components of the health care system, we turn now to a more detailed look at the role of the Medicare program in the changes in trends that have taken place. It may be recalled from our introductory statement that Medicare as a new program of payment was expected to have other ramifications in terms of provision, organization, and patterns of referral. Specifically, within a community's health care subsystem, we expected to find an expansion of facilities and services and their explicit coordination to provide more comprehensive services for the elderly. Along with this would come some revision (and extension) of referral patterns among the providers.

Provision of Health Care Services

First of all, let us look at the perceptions of our respondents about the present status of health resources in Kansas City. From the data two things are apparent: there is a tendency for all respondents except home health agency directors to view resources for the younger population as more adequate than those for the elderly, and second, but more importantly, a much greater proportion of physicians viewed the present situation as adequate than did other kinds of providers (refer to Table 20). In addition, much of the fact that resources are available now is associated with Medicare. In response to a question specifically tying the Medicare program to changes in availability of health services, 69 percent of the physicians said yes, as did 60 percent of the nursing home managers. About half (47 percent) of hospital administrators agreed also. About three fourths of the sample of older citizens also felt that Kansas City had all the health services they might need.

Despite the generally high level of satisfaction with adequacy of community resources, the perception of need for more long-term care facilities and services was also clear. Physicians cited the need for nursing home and hospital beds; hospital and nursing home operators both pointed out need for more "at home" care, long-term-care beds, and nursing homes. In fact, this seems to be the trend in Kansas City. In the 1968 surveys of managers of these facilities, 60 percent of the 39 hospital administrators indicated plans to build or expand their facilities and 64 percent planned to expand their services. At that time, planned increases were mostly

TABLE 20
Perception of Adequacy of Community Health Resources, Kansas City, Missouri

Are resources adequate?	For Residents Age 65 and Over (%)			
	Physicians	*Hospital Administrators*	*Nursing Home Operators*	*Home Health Directors*
Yes	64	31	28	—
No	25	56	54	100
DK	11	12	18	—
Total	100	100	100	100
N	55	32	80	5

Are resources adequate?	For Residents Under Age 65 (%)			
	Physicians	*Hospital Administrators*	*Nursing Home Operators*	*Home Health Directors*
Yes	71	31	33	—
No	13	50	33	100
DK	16	19	34	—
Total	100	100	100	100
N	55	32	80	5

for acute medical service (36 percent) with rehabilitation and long-term care far down the list (12 percent). In fact, however, by 1971 only one hospital had expanded its physical plant (by adding a new building) and eight others (25 percent) had increased their services. Of those, all but two were for long-term care or rehabilitation services. One hospital manager reported a new inhalation therapy department and another mentioned a pulmonary function laboratory. All the others were for social service, occupational and physical therapy, and improved discharge planning.

For hospitals as well as nursing homes, the most obvious changes have been in staff size. Half of the hospitals in Kansas City had added staff in the past two years. For three of them, staff enlargement was mostly for direct patient services—nursing, dietetics, and pharmacy. The other 13 hospitals increased their administrative staffs primarily to process Medicare-related information such as in the business office, for accounting, for recertification, for keeping medical records, and for handling insurance claims. Similarly, nursing homes, generally much less affected by Medicare, reported increasing nursing personnel, especially aides and helpers. Other changes were not directly related to Medicare.

The provision of health care services in Kansas City, then, would not seem to have changed much since the last data collection period in 1968 despite the fact that most providers in the area *perceived* Medicare as having had a strong effect on development of new services. Most plans for expansion of physical plants—articulated in the 1968 survey—have not been implemented. Only a small proportion of institutions reported having increased their services. On the other hand, most elaboration of *service programs* was in the area of rehabilitation and chronic care rather than acute medical and surgical services that typified the expansion between 1966 and 1968. However, there was a reduction in capacity to provide extended care services (in terms of available beds) and a cutback in the proportion of Medicare patients served by the home health agencies. In sum, the Medicare program has clearly influenced the provision of health services in Kansas City, but not to the degree perceived by practitioners and not to the degree expected in terms of anticipated changes.

Implications and Conclusions

Evidence on the several facets of this investigation, derived from a variety of resources, has been presented, together with an interpretation of the data according to the conceptual framework with which we chose to work. Although other theoretical perspectives could have been used to organize the data, the analysis has been organized from the viewpoints of different groups and from the more specific standpoint of changes in the orientation of participants (administrators, professionals, and patients) to the health care system in the community.

There were two important dimensions which received special attention in this report. First, compared to the initial report, there has been a much *greater emphasis on change* in attitudes, beliefs, and practices of all participants or, where applicable, of their agencies. Secondly, this report provided an *analysis in terms of the whole community* seen as a set (or system) of interrelated and interacting social units. Thus, not only did we review our data from the viewpoint of doctors, of administrators or residents, but also from the perspective of the patterns of integration of services in a metropolitan setting, other urban places, and rural counties.

A specific conceptualization of the Medicare program—as a new program in payment for medical care services for the aged—has been maintained throughout the entire life of this study which began in 1965 before the Medicare program itself went into operation. Although the notion of compulsory health insurance with or without voluntary additions is not itself a new concept, Medicare was a new program for the American public in major coverage for the total population after 65 years of age. The study was designed to determine the effects of introducing this new element into an ongoing system or, perhaps more accurately, the health care "subsystem."

The prevailing pattern of organization and financing of health services in American communities is important in this context. The general hospital has served as the focus of health services where much emphasis is placed on inpatient care, although most doctors who practice there are private entrepreneurs who collect fees for services they provide both in the hospital and in their private offices. Over the years a number of private and public agencies have developed which provide supporting or supplementary services for specialized population groups whose needs were not met by the dominant system. To the extent that health service providers are associated, it has been largely through limited referral networks, usually with the physicians as the central organizing point and seldom with either the "package" of services or the consumer as the core concern.

Given this general perspective on community services, the Medicare program was expected to: (1) encourage greater *diversity and adaptability* in care for the elderly through transitional forms of inpatient care (ECFs), in combination with care for the ambulatory in private settings and residences (home health services); (2) enable *continuity* in the sense of connecting various types of services, to provide comprehensive and extended care; and (3) *facilitate the implementation of preventive care,* health surveillance, and health maintenance, including a system of regularized continuing contact between older patients and comprehensive services.

It was expected, then, that managers of community health resources (hospitals, extended care facilities, nursing homes, and home health agencies) would respond initially to the anticipated de-

mand for more and broader services by shifting their present resources of space, equpment, and personnel to meet the specialized health care needs of the elderly. It was further expected that, in the course of time, the need for collaboration among the various providers to effect more comprehensive services under the Medicare program would lead to reorganization of health services in the sense of greater coordination and better distribution. In such a process, by virtue of their dominance in health care, local physician groups would have to play a leading role in assessing the need for collaboration and effecting the means for achieving it. This general prediction constituted a principal hypothesis concerning the impact of Medicare on health care delivery systems in local communities.

The findings of this study, the testing of the general hypothesis, can be reported succinctly: *Medicare has not appreciably altered the organization of health care services in our study community.* As with most simplified statements, however, some qualifications and further elaboration are required. The initial study, which covered the period from 1966, when Medicare began, to 1968, showed that some hospitals, home health care agencies, nursing homes, and other facilities, had shifted their resources or added to their capacity in response to Medicare—yet such changes were decisions made on the part of individual organizations, with little reference to a community system or subsystem of health care. Medicare, together with other inducements at the time, led to an expansion of the traditional acute-care capacities of hospitals. A few hospitals and nursing homes developed an intermediate level of care (extended care facilities) which ranged from identifying a few beds in an institutional setting to building a new structure for that level of care. However, physicians perceived little effect from Medicare on their practices and saw little need for reorganization of community resources, although some were beginning to utilize ECFs and/or home health care for their patients.

Recognition of the lack of effective coordination in the development of health care resources—throughout the country and for all ages—was reflected in further federal legislation supporting community or regional planning and coordinating agencies. There were several, but most germane were the Comprehensive Health Planning (CHP) Agencies (Public Law 89-749) whose purpose was to plan and effect a coordination of existing and newly created community services to provide for comprehensive health care for all citizens in the community. The evaluation of the CHP agency by

providers of health services was equivocal. Many respondents felt the agency had had little impact; others did not even know the agency existed. Needless to say, since explicit legislation had failed to bring about an increased cooperation among providers, the Medicare program itself—which was not explicitly so designed—could hardly achieve that objective.

One important difference in the findings of the current follow-up study (1971) compared to the earlier one (1968) was the general lack of additional change or plans for growth. In the initial stages of Medicare, many institutions were planning expansion of the physical plant, increasing the staff, both in numbers and in types, and increasing services. In the follow-up survey, we found that few earlier plans had been implemented, and that little further expansion of facilities or increases in staff and services were planned. Plans for expansion on the part of hospitals were largely confined to those in suburban locations and not related to Medicare or to the needs of older patients.

Between 1968 and 1971, there was continued development of larger and better-equipped nursing homes, a decline in the number of older and smaller homes, and a net increase in the total number of beds. Significantly, from the standpoint of the development of a system of continuity of care for older persons and from the standpoint of the intent of the Medicare legislation to encourage new modes of care at reduced cost, the number of extended care facilities and their utilization declined during the 1968-1971 period. Moreover, the expanding use of home health services during the 1966-1968 period had leveled off by 1971. Changes in Medicare reimbursement policies, as discussed, are intertwined with both these events. In effect, however, the initial beginning of a system to facilitate continuity of care has simply not developed in any measure proportionate to the needs.

Physicians, taken as a group, revealed some changes in attitude—for the most part less favorable toward Medicare—but little change in style or organization of practice. They overwhelmingly agreed with concepts of extended care and home health services as suitable alternatives to prolonged hospitalization (given the appropriateness of the case), but few acted upon these beliefs even though the full range of services was available to them. The private office and the acute hospital continue to be the dominant settings for care of the elderly, while alternative forms or settings for care remain largely outside the sphere of the organization of the com-

munity's resources. Thus, we must conclude that physicians have not acted to facilitate the coordination of health care in their communities even though they remain the central key to the delivery of services. We repeat our conclusion from the analysis of the data from the perspective of the community: Medicare has not (nor has anything else) appreciably altered the organization of health services in the study community.

Implications for the Future

One could argue—as we did at the conclusion of the initial report in 1970—that the time has been insufficient for changes to be felt in the larger context of cultural attitudes and social organization. We now conclude, as a result of data after five years, that Medicare has not had the effect expected. Moreover, we now conclude that Medicare, by itself and in its present form, will probably not have a substantial effect on the organization or patterns of use of health services as they are presently organized, in the older population. It will become increasingly difficult to assess the future changes in provisions and utilization of health services in terms of the degree to which such changes can be attributed to Medicare or other programs beginning to emerge.

We have noted several times that Medicare was a new program of payment for health services. In the initial report, we described at some length the *antecedent conditions* leading to the emergence of the program as a compromise response to those conditions—or at least some of them. The outcome from this new program can be viewed in terms of its acceptance or its integration into the culture base of the society. Acceptance depends in part upon the demonstrated superiority of the new program over that which it replaces as well as such factors as relative costs and benefits and ease of distribution of access.

In these terms, the Medicare program may be judged as superior to that which it replaced. It has increased the access of older persons, especially the disadvantaged, to health services they need. It has greatly reduced the depletion of their fixed assets by prolonged medical expenses.

Once past the hurdle of overt resistance from organized medicine, there seemed little change in ideology underlying the provision of health services. The system that existed received increased financial support. Our data indicate that practicing physi-

cians accepted the program, with some reservations about the "long term effects."

Total costs and benefits are more difficult to assess. The cost of the program has far exceeded early predictions, but the proportionate benefits to older people as recipients of services (or providers as recipients of payment) have also been documented. Without Medicare, the cumulative costs and secondary damage to the older population by now would be extremely great. Public assistance and other welfare costs to the public would doubtless have been extended. In such terms, we agree with the great majority that Medicare is a success.

Most of the physicians interviewed in our studies and those from other studies (Coe and Sigler, 1970; Colombotos, 1968, 1969) support the idea of Medicare as an insurance mechanism for a neglected population group. Certainly many of them have benefited financially from the program because of the compromise provisions of the legislation. Herein lies one of the elements of the failure of the Medicare program to have the far-reaching effects predicted for it. Physicians remain in control of the entire medical network of services either directly with patients or indirectly by being the authorizing agent for other levels of care. Indeed one could argue that their position has been strengthened by increasing the number and level of services under Medicare benefits. More importantly, the legislation, as presently designed, rewards physicians for not making any changes in the system or in the style of their practices. Hospital use by the doctor is rewarded both professionally and economically. To a lesser extent, other levels of care can be included, but usually only if the hospital's needs (for full beds) are satisfied. Nursing homes are not generally a part of the system. Their relationships to hospitals are largely confined to referral. In general, physicians relate to nursing homes, or to patients in homes, infrequently and almost tangentially.

If the health delivery system is to be encouraged to change in order to serve the needs of the chronically ill aged more effectively, rewards have to be provided for making such changes. An increase in the supply of physicians and other health personnel could induce some to organize units for more effective service to the chronically ill aged, which could induce older patients to select such units in preference to traditional practice. Even under such conditions there would have to be assurance of Medicare reimbursement. Clearly what is required is some change in the Medicare legislation and in reimbursement practices—combined with older efforts to encourage and reward the development of

comprehensive, coordinated delivery systems.

Legislative proposals are under review for some form of national health insurance for the entire population. Experience with the Medicare program can provide some insights applicable to future programs. One principle we would urge in any new legislation is to incorporate incentives for providers to change the organization of the delivery system.

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This project was supported by contract number SSA 71-3400 and conducted under the auspices of the Institute for Community Studies, Kansas City, Missouri.

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