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ABSTRACT

Family-physician relationships were examined in terms of solo vs group physician practices in two rural southern counties of different socioeconomic status. Comparatively speaking, County B was poorer, had a much higher representation of blacks, had lost considerable population during 1960-70, depended to a much lesser degree on manufacturing, and had a lower educational level than County A. However, County B relied primarily on solo physician practices. Utilizing a six item questionnaire, 378 households from both counties were surveyed to determine the physician-patient relationship; resulting met and unmet needs were determined via an eight symptom checklist. Three hypotheses were tested: (1) the more group-like a physician practice organization, the weaker the family-physician relationship; (2) the weaker the family-physician relationship, the greater the unmet need; and (3) the more group-like a physician practice organization, the greater the unmet need (of families which rely on that organization for primary care). Results revealed that family-physician relationships were stronger among solo-practice patients than among group practice patients and that the strength of family-physician relationships influenced the health level of the household. (JC)

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SOLO AND GROUP PHYSICIAN PRACTICES, FAMILY-PHYSICIAN RELATIONSHIPS AND UNMET CRITICAL HEALTH NEED IN RURAL AREAS[1]

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ABSTRACT This paper examines the effects of organizational complexity in ambulatory health-care-delivery settings. Data were obtained in a field survey of households in two rural Southern counties constituting a probability sample. Family-physician relationships are found to be stronger in the case of solo-practice patients than in that of group-practice patients. Both the strength of that relationship and practice setting are found to be associated with the level of health of households. The conclusion is drawn that rural populations are less receptive to bureaucratically organized delivery systems than to the traditional solo-practice system.

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SOLO AND GROUP PHYSICIAN PRACTICES, FAMILY-PHYSICIAN RELATIONSHIPS AND UNMET CRITICAL HEALTH NEED IN RURAL AREAS

Problem

It is generally contended that group physician practice, in contrast to solo practice, provides more efficient and higher quality health care. The former health-care delivery arrangement affords, for example, peer review of medical expertise, a broader base of consultation on medical cases and greater fiscal resources which enhance diagnostic and treatment facilities. However, the premise that group practice is necessarily the superior setting has been called into question. For instance, Freidson (1970), distinguishing between technical-therapeutic and patient-management tasks of the physician, suggests a neglect of the latter, which is more likely to occur in a group practice setting, undermines the objective of the former. He contends that patient-management or nonmedical tasks of physicians are manifest in the presence or absence of amenities in patient-physician interaction. The amenities are significant in that they "constitute both recognition of patients' dignity as human beings and an effective instrument for initiating a social relationship by which patients may be led to cooperate better with the needs of their treatment" (Freidson, 1970:197-205).

The present paper goes a step further with regard to the significance of patient-management tasks proposing that an even more crucial aspect is a patient's consideration of them in his decisions as to

whether care should be sought when symptoms are perceived. If people fail to seek medical help, then the quality of care is irrelevant. To get at the problem the discussion centers on: 1) family-physician relationships (in rural areas); 2) alteration of those relationships due to structural or organizational changes in the delivery of health care; and 3) how those structural elements enter into help-seeking decisions and account for differentials in health status.

Framework

Family-Physician Relationships. A family's interaction with the medical-care system is channelled through its physician. When a family seeks care, an association with a licensed physician, who has the legal right and responsibility to act as "gatekeeper" (Duff and Hollingshead, 1968:7), is imposed. For example, a physician makes decisions as to whether a patient is hospitalized, is to receive drugs, or is sufficiently ill to require the aid of a specialist. The benefits a family receives from the medical-care system are constrained by its access to a physician and the extent to which he initiates and manages the delivery of services.

While a physician has legal responsibilities to coordinate medical-care services, the extent to which he does so is influenced by the personal responsibility he assumes for the physical well-being of family members. Similarly, the adequacy of health care will vary to the extent to which individual practitioners make themselves available to those seeking care. Therefore, the family-physician relationship is the expectation of a family of gaining access to available services through a physician and the degree of responsibility he assumes for the coordination

of a family's receipt of care. Operationally, the family-physician relationship (FPR) can be gauged by assessing: 1) the degree of inconvenience a family encounters in its interactions with its physician, and 2) the degree to which he coordinates a family's care within the complete range of services available.

Organizational Structure of Health-Care Delivery Systems. Medical-care delivery systems have adapted to increased demand in rural areas in various ways. One of those ways is the formation of group practices. Freidson (1970:205) refers to a group practice as "simply...an association of cooperating physicians in a joint economic enterprise." In comparison to solo practices, group practices are larger and more complex organizations.

The size and complexity of an ambulatory health-care-delivery setting affects patient-physician interaction. To examine how a physician's behavior is affected by organizational structure, his behavior can be differentiated into two types of tasks generic to his role. First, there are the medical tasks of a physician, the "technical medical therapeutic practices" which center around the physical well-being of the patient. Second, there are the nonmedical tasks, the "patient-management practices" of a physician as manifest in the presence or absence of amenities in a physician's interaction with his patients (Freidson, 1970:195-205).

As an organization increases in size and complexity, there arises a functional necessity to formalize procedures and differentiate task assignments (Blau and Schoenherr, 1971:301). The standardization of medical task procedures is likely to cause the formalization of patient-management practices with the sacrifice of amenities (Freidson,

1970:204-205). Thus, since a group practice involves an increase in size and complexity compared to solo practice, it can be postulated that:

Axiom 1: The more group like a physician-practice organization, the more formal the patient-management practices.

Patient-Management Practices and Family-Physician Relationships. In the sense of meeting the traditional expectations of the doctor-patient relationship, it might be that family physicians no longer serve all the functions expected by their patients. For instance, the traditional family physician fitted an ideal type which in terms of accessibility included the particularly amenable gesture of making house calls. Of course, that behavior is no longer functional since patient care centers around immobile machines (such as the x-ray). Accessibility to medical care now can require coping with the "red tape" of a bureaucracy attempting to meet increasing demand. The physician in many instances has turned some of his functions over to subordinates and patient processing has become formalized. But patients, particularly those in more traditional rural areas, still expect, or at least desire, certain amenities in their interaction with their physician and assistance from him when other services in the total system are utilized. Where these amenities are lacking, confidence in a physician is lost. Therefore, as a second axiom, it may be stated that:

Axiom 2: The more formal the patient-management practices of a physician, the weaker the family-physician relationship.

Help-Seeking Decisions. A number of factors influence the decision to seek professional help upon the recognition of a medical need. A

factor relevant to this discussion is the convenience of seeking care. Rosenstock (1959) has shown how the factor of convenience effects decisions toward seeking preventive health measures such as vaccinations. Mechanic (1968:155) concludes in this respect that

> in general the factors affecting acceptance of health action are similar to those influencing voting, participation in community affairs and the like.

Convenience is an attribute of a strong family-physician relationship. Thus, one can postulate that a weak relationship, an inconvenient one, might affect decisions to seek medical care and thus indirectly affect the health status of a household as reflected by the extent to which its health needs are met.

Axiom 3: The weaker the family-physician relationship, the less the degree of help-seeking behavior.

Axiom 4: The less the degree of help-seeking behavior, the greater the unmet need.

Hypotheses

On the basis of the axiomatic framework above, several relationships are derived of which three are tested:

(1) The more group-like a physician practice organization, the weaker the family-physician relationship. (Axioms 1 and 2).

(2) The weaker the family-physician relationship, the greater the unmet need. (Axioms 3 and 4).

(3) The more group-like a physician practice organization, the greater the unmet need (of families which rely on that organization for primary care).
(Axioms 1, 2, 3 and 4).

Method

The data for this study are taken from a survey of 378 households in two rural Southern counties[2] which deal with various aspects of medical care and its delivery. This sample size represents four percent of the households in the two counties. To identify households in which to conduct interviews, an area-probability sampling design was used.[3] The survey resulted in a 91.7 percent response rate for those households approached (Webber and Ritchey, 1975).

The two counties (signified A and B) exemplify somewhat different situations of population composition and physician supply. Although their populations in 1970 were nearly the same (County A, 16,252; County B, 16,888), the two counties differed in important respects. Median family income in County A in that year was $5,501, compared with only $3,852 for County B. Corresponding to this, 24.6 percent of families in County A had income below the federally defined poverty level, against 44.7 percent in County B. With 66.4 percent of its population classified as members of the black or other races, County B had almost five times as large a proportion as County A (13.9%). The latter county experienced a very slight increase in population between 1960 and 1970, 0.6 percent; County B, in contrast, lost 18.7 percent of its people during that decade. The employment base in County A rested heavily upon manufacturing jobs. Finally, the population of County A aged 25 years

and over had a median of 9.5 years of education completed, comparing with 8.5 years in County B. In summary, compared with County A, County B was (1) poorer, (2) had a much higher representation of blacks, (3) had lost considerable population during the 1960-1970 decade, (4) depended for employment to a much lesser degree on manufacturing industries, (5) and had a lower educational level (data taken from U. S. Bureau of the Census, 1970a and 1970b).

With respect to the delivery of health care in the two counties, one major structural difference stands out. In County A physician manpower of four physicians is centralized in a group practice, whereas the three physicians in County B operate solo practices. That is not to say that all households in County A use the services of a physician of the group practice; some rely on solo practitioners who have practices outside the county. All physicians in both counties are general practitioners, and all operate on a fee-for-service basis. Though the physicians at the group practice are located in the same facility, each maintains a relatively specific clientele.

In testing hypotheses, comparisons are made between respondents of County A households which do and do not state a physician at the group practice as their primary physician. Then data for County B are included. Considering the differences in demographic composition of the counties, the inclusion of County B data constitutes a conservative test. This is because the demographic data would lead one to expect County A respondents to be healthier on the whole; the propositions presented here predict otherwise. If the hypotheses hold up, then the inclusion of County B data strengthens the validity of the theory.

The variable "group-likeness" is operationalized dichotomously

as (a) group practice and (b) solo practice according to the type of practice stated by respondent households to be their source of primary care. That variable was ascertained on the basis of the location of the office of the physician designated as the "family doctor."

As noted above, the family-physician relationship is operationalized as the degree of inconvenience a family encounters in interaction with its physician and the degree to which a physician is believed to be a central coordinator of care receipt. Questions which deal with the various behaviors respondents encounter and expectations they have of their doctors measure that relationship. An ordinal scale was constructed from a summation of trichotomized responses to the following questions:[4]

(1) Does your family have one doctor you consider your family doctor?[5]

(2) When you go to his office how long do you usually have to sit in the waiting room?

(3) If you went to another doctor for some reason, would you tell your family doctor what the other doctor said?

(4) Does your family doctor have a record of all the services your family has received from him?

(5) Does your family doctor have a record of the medical services your family has received from other doctors?

(6) If you suddenly got very sick when the doctor's office was not open, where would you turn for help?

The possible range of household scores is zero to 12. A score of 12 indicates a strong relationship between a family and its "family doctor." A score of zero indicates an extremely weak relationship.

Unmet need, a dimension of health status, is measured by means of a checklist of physical symptoms. For this report analysis is limited to the following eight symptoms thought by medical consultants to indicate a more-or-less critical need for attention:

Coughing up blood.

Fainting or blackout spells.

Heart beating hard or "acting funny."

Weight change of 10 pounds or more in a few weeks.

Urinating more than twice a night every night.

Swelling of the ankles.

Black or tarry stools.

Double vision.

The presence of one or more of these symptoms constitutes a medical need because of the critical nature of the symptoms. If these symptoms are present and have not received the attention of a physician, then they are considered evidence of unmet need. And the degree of unmet need in aggregate groups gives an indication of both the health status of certain groups and the responsiveness of the medical-care-delivery systems to the needs of those groups.

Within the limits of its measurements, unmet critical need controls to a certain extent for the overutilization (see McKinlay, 1972: 132) of physician services since it does not measure "unnecessary" treatment; it deals only with symptoms which, by definition, constitute need. Furthermore, the use of critical symptoms minimizes variation in the necessary self-diagnoses of survey respondents, a basis of criticism of health survey data (for example, see Fink, 1969). A summated computation of unattended critical symptoms constitutes an ordinal scale,

but is treated statistically as an interval scale measure.

Results

Stated operationally, Hypothesis 1 is: Households in Counties A and B which designate the group-practice as their source of primary care have weaker relationships with their physician than those respondent households which rely on solo practitioners. Data investigating this hypothesis are given in Table 1.

[Table 1 about here]

In County A, those respondent households that utilize solo practitioners are found to have significantly better relationships with their physicians than those employing the group practice ($t = 4.827$, $p < .01$).[6] Of those households in both counties reporting solo practitioners as their source of primary care, those in County A have significantly higher FPR scores than those in County B, though the difference is of a lesser magnitude than the differences between delivery systems within County A. The demographic differences between the two counties explain the latter result.

Collapsing the distribution of FPR scores into high, medium and low categories allows a more graphic interpretation of the data by an examination of the percentage of households in each category according to practice (Table 2).[7]

[Table 2 about here]

Table 2 reveals a disproportionately low frequency of "low FPR's" for respondents who go to solo practitioners ($\chi^2 = 9.5656$, $p < .05$). This suggests that those respondent households which rely on solo practitioners are less tolerant of "weak" relationships with their physicians. In

that respect, the data suggest that group practice respondents have a greater tendency to remain with their physician even if dissatisfied with him, because a switch to another physician in the practice would require coping with the bureaucracy of its structure and would obviously be noted by their present physician. In that sense the group practice constitutes a monopoly which the physicians there recognize as a source of conflict for their patients.[8] If a household is uneasy with its relationship with a group physician, then it must be willing and financially able to go out of the county for health care. Faced with such a dilemma, a household might let health needs go unmet.

The data for hypothesis 2 which deals with the relationship of FPR and unmet need are given in Table 3.

[Table 3 about here]

The prevalence of unattended critical symptoms, or unmet need, is found to be inversely proportional to the strength of a household's relationship with a family doctor ($F = 4.1473$, $p < .05$).

With regard to Hypothesis 3, that households relying on group practice will have greater unmet need than those depending on solo practitioners, Table 4 gives the mean number of unattended critical symptoms for types of practice settings.

[Table 4 about here]

For the County A respondent households, significant differences in the predicted direction are found in the degree of unmet need between those naming a group practice physician and those indicating solo practitioners as their source of primary care ($t = 2.069$, $p < .05$). And of particular significance, no difference is found between households in

County A and County B reporting solo practitioners as their "family physicians." This suggests that much of the variation in unmet need between the counties can be attributed to the differences in their predominant ambulatory-health-care delivery systems (see footnote six).

Discussion and Conclusion

This paper began with the concern of whether the organizational complexity of group-practice settings in rural areas hampers the delivery of health care to the extent that therapeutic objectives are undermined. It was proposed that the complexity of health-care-delivery organization alters patient-physician relationships which, in turn, influence help-seeking decisions. Tests of hypotheses lend support to the theory. The results strongly suggest that some people allow medical needs to go unmet because of a distaste for bureaucratic health-care delivery.

A possible interpretation of these findings is that the doctor shortage in rural areas, to a great extent the effect of the concentration of physicians in urban areas, has lead to organizational changes in the delivery of care. Structural changes of this type are manifestations of the total society's transition from Gemeinschaft to Gesellschaft (Toennies, 1940:16). Such a rural-urban transition requires the reintegration of social systems (in this case, medical) by the institutions and individuals involved. It is to be expected that rural populations would lag in such a transition.

Where does the evidence leave us with regard to which delivery arrangement is preferable? In approaching the problem of group versus solo practice some would suggest a compromise in patient-management

concern with the idea that patients would eventually learn not to rely on medical doctors for phychological or psychosomatic therapy. The evidence presented here refutes this approach. Others would recommend a reliance on solo-practitioners, but that approach would allow technical advantages of group-practice organization to be wasted. Considering what we know about patient-physician interaction and its consequences on health-care-delivery, it becomes obvious that neither arrangement in its absolute form provides the best care possible.

This conclusion suggests the answer to the problem would be, of course, to integrate the beneficial parts of the two types of organizations. This would mean first of all that the physical setting be a group arrangement since certain advantages are found only in that setting. Then, the setting can be styled keeping in mind the benefits of personable patient-management practices. Such a styling of delivery might involve, for example, limiting "joint economic enterprises" to the sharing of hardware and bookkeepers. When in an ambulatory setting, patients generally encounter physicians, nurses and technicians; each doctor in a group practice might have his own auxiliary medical personnel who patients can associate with him and who remain constant for the patient from one visit to another. In addition, attention should be given to the physical environment; separate waiting and examination rooms might be provided for each physician; at least, partitions might be used to give the appearance of separate waiting rooms. Shared equipment and personnel could be centralized and away from examining rooms. Patients' privacy could be respected by structuring offices so that patients are not constantly encountering one another in the halls. In general, patients should feel they are receiving individual attention

while simultaneously receiving the benefits of group-practice arrangements.

A first step in implementing such a program is to make physicians aware of the consequences of their nontechnical behavior and the benefits of group settings. Though affirmative action in this regard often runs head-on into the American Medical Association, recent successes in various areas of health-care-delivery (such as family-practitioner programs in medical schools, national health insurance proposals, etc.) suggest it is feasible.

REFERENCES

Blau, Peter, and Richard A. Schoenherr

1971 The Structure of Organization. New York: Basic Books.

Duff, Raymond S., and August B. Hollingshead

1968 Sickness and Society. New York: Harper and Row.

Rink, R.

1969 "The measurement of medical care utilization." In M. R. Greenlick (ed.), Conceptual Issues in the Analysis of Medical Care Utilization Behavior. Department of Health, Education, and Welfare. Public Health Service: 5-22.

Freidson, Eliot

1970 Professional Dominance. New York: Atherton Press.

Hollingshead, August B.

1957 Two-Factor Index of Social Position. New Haven, Connecticut: privately published.

McKinlay, John B.

1972 "Some approaches and problems in the study of the use of services—an overview." Journal of Health and Social Behavior 12 (June):115-152.

Mechanic, David

1968 Medical Sociology. New York: The Free Press.

Rosenstock, I. M.

1959 "Why people fail to seek poliomyelitis vaccinations." Public Health Reports 74:98-103.

Toennies, F.

1940 The Fundamental Concepts of Sociology. tr. by C. P. Loomis, New York: American Book.

U. S. Bureau of the Census

1970a Census of Population: 1970 General Social and Economic Characteristics. Final Report PC (1)-C2 Alabama, Washington: U. S. Government Printing Office, 1972, Tables 43 and 44.

1970b Census of Population: 1970 General Population Characteristics. Final Report PC (1)-B2 Alabama, Washington: U. S. Government Printing Office, 1971, Table 16.

Webber, Irving L., and Ferris J. Ritchey

1975 The West Alabama Medical-Care Study. Sociological Studies Series Number 2. Tuscaloosa: Bureau of Public Administration, University of Alabama.

FOOTNOTES

2. Rural counties are considered those which are not part of a Standard Metropolitan Statistical Area as defined by the U. S. Census. The sample in the survey was stratified by residence for technical reasons; urban areas were subsequently "oversampled." Thus, weighted adjustments were made to obtain appropriate values for urban and rural households.

3. The urban centers (those with 2,500 inhabitants or more) and the rural areas of each county were divided into equal sized areas on the basis of population density. Selection of the geographic areas to be sampled was made using random numbers.

4. The item analysis for the scale involved a t-test of the differences between the means of each item for the upper 19 percent and lower 16 percent of the scale scores; all six items were found to be significant discriminators ($p < .001$). The responses to the items were scored as follows: Item 1. 0 = no, 1 = have regular doctors but none preferred, 2 = yes; Item 2. 0 = more than two hours, 1 = one to two hours, 2 = less than an hour; Item 3. 0 = no, 1 = only if he asked, 2 = would call and tell him; Item 4. 0 = no, 1 = don't know, 2 = yes; Item 5. 0 = no, 1 = don't know, 2 = yes; Item 6. 0 = don't know, 1 = call relative, friend, etc., 2 = call family doctor.

5. Item one is to ascertain whether patient households perceive themselves to have a single reliable link with the medical care system. This item is independent of whether or not the physician operates in a group practice situation.

6. It is important to note here that no association was found between type of practice setting patronized by a patient household and its socioeconomic status as measured by the Two-Factor Index of Social Position (Hollingshead, 1957).

7. Scores of 0-6, 7-8 and 9-12 were assigned to low, medium and high categories and 24.26, 38.01 and 37.73 were the respective percentages of households (of the total adjusted frequency of 705) in each category.

8. This interpretation is based on interviews with personnel and physicians.

Table 1. Mean family-physician relationship (FPR) scores for types of physician practice organization in Counties A and B

Type of practice and county	FPR Scores		
	Mean	Std.dev.	n
County A	6.943	3.040	298
Group practice	6.675	3.271	236
Solo practice	8.035	1.453	62
County B	7.632	2.573	433
Solo practice	7.632	2.573	433

Table 2. Percentage of households in family-physician relationship (FPR) categories for types of practice organization in Counties A and B

FPR	County and Type of Practice		
	County A		County B
	Group	Solo	Solo
Low	31.65%	14.75%	22.04%
Medium	34.60	47.55	38.05
High	33.75	37.70	39.91
Total	100.00	100.00	100.00

Table 3. Mean number of unattended critical symptoms per household for family-physician relationship (FPR) score categories

FPR	Unattended Critical Symptoms Per Household		
	Mean	Std. dev.	n
Low	.491	.883	180
Medium	.380	.821	276
High	.277	.652	276

Table 4. Mean number of unattended critical symptoms per household for types of physician practice organizations in Counties A and B

County and practice organization	Unattended Critical Symptoms per Household		
	Mean	Std. dev.	n
County A	.428	.936	298
Group Practice	.462	1.008	236
Solo Practice	.269	.523	62
County B	.333	.660	432
Solo Practice	.333	.660	432