Teamwork in Health Care in the U.S.: A Sociological Perspective

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Reactions to teamwork, whether in health care, science and research, or in other areas, are seldom neutral. While some see in it a panacea that will help solve many stubborn organizational problems, others condemn it on a variety of grounds. Impetus to the development of team approaches to the delivery of health care and concern over their performance have been tied to a number of trends: a marked increase in specialization and division of labor as a result of expansion in health-related knowledge and technology, a corresponding emphasis upon coordination, a broadening concept of health and an increase in the types of activities included under its rubric, and a manpower shortage especially in the highly trained professions.

This paper reviews current studies, important findings, and points out neglected dimensions. Themes prominent in the literature include: (a) status, power, authority, and influence; (b) roles and professional domains; and (c) decision making and communication. A number of important dimensions seem to be neglected, such as the effectiveness of teams as an approach to the delivery of services, the modes of organization and the dilemma of gate-keeping decisions, and the relations of team approaches to the manpower problems.

Reactions to teamwork, whether in health care, science and research, or in other areas, are seldom neutral. While some see in it a panacea that will help solve many stubborn organizational problems, others condemn it on a variety of grounds. To borrow Homan's expression, it seems that team approaches are viewed as matters of morals rather than matters of strategy. In spite of such strong attitudes, or perhaps because of them, literature on this topic remains more descriptive and prescriptive than analytical. The attempt in this paper will be to clarify the place of teamwork in health care, to review the thrusts of current studies and the important findings, and to point out some neglected dimensions that warrant research attention.

The Place of Teamwork in Health Care

Impetus to the development of team approaches to the delivery of health care and concern over their performance have been tied to a

number of trends. To begin with, health care has experienced a marked increase in specialization and division of labor. For the most part this trend has been the product of a phenomenal expansion in health-related knowledge and technology. The modal practice for a physician in many societies, and certainly in the United States, has changed from a general one to one of specialization in certain systems or pathologies, and often to more narrow specialization within these (Somers and Somers, 1961). Modern diagnoses call for a varied number of laboratory, radiologic, psychometric, and other tests. Interdependence in present-day surgery is built around an array of health personnel.

Another relevant trend has been one of an expanding scope for the concept of "health," and a corresponding increase in the domain of activities encompassed under the rubric of health care. This trend stems from a better understanding of the tendency of human problems to cluster, and a recognition that health concerns can be addressed with greater effectiveness when considered within the context of other problems. Diverse health professionals are brought into closer working relationships with others dealing with such problems as poverty, unemployment, housing, and delinquency and other forms of deviance.

Specialization with its associated fragmentation of services and the interdependence of health workers and others dealing with related problems underlie the many attempts toward "coordination" and "integration" of services. Specialization, beneficial in many ways, is destined to continue and increase in the face of expanding knowledge and technology. The most obvious way to overcome its negative side effects lies in the notion of bringing together the opinions and approaches of specialists to bear upon a problem that cuts across their specialties. Teamwork in health care is an operational manifestation of this notion. This is not to say that teams represent a new phenomenon in the field, nor that they necessarily have been or are comprised of differing specialties. Earlier and present collaboration among general practitioners is known in the form of group practices or in consultation with each other over complex cases. However, much of the current teamwork represents multiple specialties and often multiple professions. At any rate, primary concern in this paper is with these latter types of teams.

Another important factor in the significance of team approaches in health care delivery stems from certain aspects of the

manpower situation. While the supply of physicians has not kept pace with rising demands for health services, there has been a phenomenal proliferation of health professions. In the absence of long-range and effective manpower policies in this field, the development of new professions has been highly unsystematic. Discussions of these policies revolve around such issues as realigning the boundaries of professional domains and the articulation of roles among the various professions. These lines of thought are generally predicated on the assumption that many of the functions presently performed by the highly trained health professionals, such as physicians who are in short supply, could be delegated to others with lesser training requirements. In fact, some would contend that the problem is not one of shortage of physicians, but of coordinating roles in the delivery system. Here again, the team concept arises as a mechanism for such coordination.

Beyond the traditional physician-nurse teams and others consisting of specialists from different areas of medicine itself, the last three decades have witnessed considerable increase in the numbers and types of team formations in health care. In institutions of the mentally ill or retarded, therapeutic teams have included combinations of psychiatrists, other physicians, psychologists, psychiatric social workers, nurses, occupational therapists, and others. Rehabilitation service centers and long-term facilities for the physically impaired are organized around teams that include some of the specialists mentioned above in addition to others in physical therapy, prosthetics, and vocational rehabilitation. Ambulatory facilities such as in programs of maternal and child health provide services through primary teams that include pediatricians, psychologists, nurses, social workers, nutritionists, and often laymen who perform outreach functions. Patients have also been included as part of the collective therapeutic process usually referred to as therapeutic communities. Different health care programs may also designate liaison members who in effect constitute teams to work on the integration of these programs.

A common characteristic shared by these teams is the direct face-to-face interaction among members in the course of performing services. Concern with teamwork, however, goes beyond these face-to-face formations to the problems of articulating the roles and functions of health care providers within the larger institutional or community contexts. The problems are not unrelated, but emphasis in this paper is upon the primary face-to-face teams.

Prominent Themes in the Literature

Much of the analytical literature on teamwork is about interdisciplinary research and other forms of collaboration in scientific activities. This literature will be drawn upon whenever it is useful in clarifying issues related to health care teams. Although research and analysis concerning teams have been primarily structural in perspective, some analysts have placed their emphasis on social-psychological factors such as "good interpersonal relations among team members" and "being able to work together." One study of research teams concludes (Eaton, 1951:709) that "collaborators must have strong common values, confidence in each other's ability, and certainty in each other's interests to contribute to a common goal." Other investigators refer to the need for "leadership skills" on the part of some members, and "membership skills" on the part of all (e.g., Rubin and Beckhard, 1972). Most analyses, however, are organized around structural variables and processes that will be summarized in the following paragraphs.

Status, Power, Authority, and Influence

The dominance of the medical profession in health care activities has been well explained. As Freidson (1970:16) points out, "in spite of . . . struggling" segments "within the ranks of those holding the M.D. degree and in the face of non-medical occupations struggling for access to the task of healing, the profession [Medicine] still preserves a common identity and sustains a superordinate position." Such dominance manifests itself in the structure of authority and decision making, which seem to vary according to the settings. Surgical wards were reported to be more structured than medical wards where decision making was generally by consensus (Coser, 1958). And, as would be expected, authority within surgical teams in operating rooms is highly structured (Wilson, 1966). Earlier studies on stratification among staff members in hospitals show that fuller and clearer communication to and about patients was more characteristic of wards with low than with high stratification (Seeman and Evans, 1961a;1961b). Evidence also indicates that some hospital staffs accept neither the status positions they are assigned nor the system that assigns such hierarchies (Lentz, 1950). Although these findings represent hospital wards, the generalizability of the propositions to team-

work seems plausible. Corroborative evidence of the superiority-inferiority problem and its negative influence on collaboration comes from studies of teamwork in science (Hagstrom, 1967). It is not clear, however, to what degree physicians are involved in the struggle for status and authority in health care teams. It might be argued that their dominance is more widely accepted, and that such struggles are more intense among the other professions still seeking a place in the hierarchy (Zander et al., 1957).

The class and status positions of patients in relation to the health professionals, and the influence of these factors on the services patients receive, have been largely assumed rather than verified. The issue is important to the performance of "therapeutic communities" where patients become part of larger teams. In connection with public health activities, Simmons (1966) points out that class and status consideration have significance to the functioning of the teams by influencing interpersonal relations within the health teams and between the teams and the public. One conclusion drawn from this work is that optimal therapeutic relationships evolve when professionals and patients are from similar class backgrounds. In part, this proposition underlies the employment of indigenous groups as outreach personnel in many health care and other services dealing with low-income families such as the neighborhood Health Centers, the Maternal and Infant Care Programs, and the Children and Youth comprehensive health programs. The assumption is that similarity in status would help facilitate communication.

Roles and Professional Domains

A considerable amount of the literature in this area is concerned with the roles of the various health professions including time and motion studies (e.g., Bergman et al., 1966). The utility of such literature to the analysis of teamwork is limited in that it does not address the articulation of roles of different professions. However, these accounts are instructive to the extent that they show the ambiguities of roles in certain professions and the overlap among them that can become a source of difficulty in organizing teamwork. In this connection, it is important also to note that roles performed by persons from the same profession vary in different settings.

Although some writers may question the need for physicians in certain types of health delivery teams (e.g., Wise, 1970), most dis-

cussions of division of labor assume the centrality of the physician's role. Several demonstrations report the expansion of physicians' practices and capabilities to serve more people by the addition of one type of health profession or another (e.g., Silver, 1963; Rogers et al., 1968). Underlying some of these demonstrations is an attempt to show that some of the traditional functions of the physicians can be performed by others, such as nurses, social workers, etc. Data on this issue, however, is still vague and bears little fruit for action. Lacking is information about the specifics of the physician's role, the legal boundaries of the role, and specifics of what other professions can undertake, whether or not such change would require alterations in existing laws, and the consequences of changes in roles and tasks to the quantity and quality of health care delivered. Difficulties in realigning the boundaries of professional domains are greatly compounded by potential economic and other status consequences associated with roles which lie at the heart of interprofessional struggles.

A related theme in the literature concerns the articulation of roles. Differing but complementary roles and orientations were found to contribute to cohesion (Turk, 1963). Specialization is seen as a deterrent to the members of a given profession against meddling in the professional domain of the others. Several analysts speak of the necessity of a clear division of labor as a condition for the effectiveness of teamwork in health care as well as in other collaborative endeavors (e.g., Svarstad, 1970; Beckhard, 1972; Rubin and Beckhard, 1972; George et al., 1971; Horowitz, 1970). Developments in this direction are predicated on at least four elements: (1) clarity and specificity of roles; (2) specialization and minimal overlap; (3) complementarity of roles in working toward a collective goal; and (4) shared understanding and acceptance of role definitions by members of the teams. Specialization and understanding of the roles of others may seem to be contradictory requirements. However, the significance is in the degree, and some understanding of the roles of other team members is necessary for the articulation of one's own activities with those of others. Such articulation constitutes the difference between integrated teamwork and the collection of activities of independent professionals who are disparate in education and modes of services. It is one thing to identify such elements in the articulation of roles, but a far more difficult task to provide relevant hard information useful for organizing teams. As has already been mentioned, the literature is

replete with assertions of prerequisites for effectiveness but exhibits serious gaps in systematic analyses of these topics. It is important to mention that the lack of clarity in accounts of roles and their specification cannot be merely considered as a limitation of studies and research but as a reflection of ambiguities in the roles themselves.

Decision Making and Communication

Two aspects of team decision making warrant attention. *First* is the structure of decision making which relates closely to the structure of roles and authority. Two models of decision-making structures are depicted in the literature—the "hierarchical" and the "egalitarian." The merits and demerits of these models are argued in the main on ideological grounds with limited and often no empirical verification (e.g., Lewis, 1969: Crombie, 1970). Reported also are feeble attempts to integrate the two models by simply specifying some personal characteristics of leaders, and prescribing flexibility in roles and openness in communications (Lewis, 1969). Most teams operate within the framework of larger organizations. The authority structure within parent organizations and the constraints they impose on the teams can be expected to influence the team's structure for decision making. Organizational constraints are equally, if not more, important in the decision-making structure of *inter*organizational teams. When members of such teams represent independent organizations, each usually becomes endowed with a veto power over unacceptable decisions. The resulting structure varies from the two models mentioned above.

The *second* aspect of decision making is a substantive one, that is, what agreements and disagreements take place among team members in regard to the substance of decisions. Difficulties in this respect stem from differences in perceptions, concepts, methods, and treatment modalities. The issue is one of barriers in communication. Blocks and distortions in communication have been reported in several studies (e.g., Frank, 1961; Brodsky, 1968). Team members from varying professional backgrounds were shown to differ in their perceptions and evaluation of patients and their conditions (e.g., Weissman, 1969). It should be noted, however, that these studies usually derive data from case studies of individual teams, and therefore influences evolving from differences in professional orientations are not sifted from differences in other characteristics of team members. To unravel the relative

weights of these two sources of influence would require an experimental design that incorporates a number of professions and a number of persons from each profession.

In addition to the influence of substantive variations among the health care fields, communication among team members can be further complicated because of differing orientations in regard to the importance of services versus inquiry. Consider for example differences along these lines between clinical psychology and social work. While training in the former follows a scientist-practitioner model, training in the latter is more toward practices with less concern for scientism. Even within the same field some training institutions emphasize services while others may highlight research and verification. The two orientations entail many points of conflict (Nagi, 1965). Consistent with a service stance is a belief in techniques and modalities being applied to patients, while an orientation toward inquiry means that information is always held in a tentative status. Furthermore, commitment to services orients health practitioners to the uniquenesses of patients, while commitment to inquiry focuses attention on patterns. Although differing orientations along these lines might impede substantive communication, their influence on the social cohesion of teams might not be necessarily negative (e.g., Turk, 1963). The conditions under which differing orientations affect communication and cohesion, as well as the direction and degree of effects, are empirical questions still largely unexplored.

Another issue in communication that remains obscure concerns the direction of information flow across fields and its relation to the relative status of the various professions and their centrality in the teams' operations. Even when members of a team lack knowledge about each other's fields at the beginning, learning is bound to take place as the team continues. The question is: Which fields are members of a team more likely to learn about? It is submitted that the flow of information will be influenced by the relative status of the fields in the professional hierarchy, and will tend to move from the higher to the lower ones. At the risk of oversimplification, it can be said that the flow of information depends upon: (1) the readiness of those who possess the information to transmit it: (2) the readiness of the ones to be informed to seek or at least receive it; and (3) a variety of conditions related to means and contexts of information transfer. The direction of flow hypothesized here is not necessarily predicated on the readiness of

members of the higher status fields as transmitters of information about their fields but primarily on the receptivity of members of the lower status fields to such information. One consequence of this pattern of information flow, if empirically true, is that the articulation of roles in teams comes about primarily as a result of accommodations of the lower status fields to those of higher status. This limits the possibilities of re-examining the roles and realigning the boundaries of the higher status fields and professions.

Neglected Dimensions

The foregoing discussion is intended to be neither an exhaustive account of available literature nor of possible topics around which the material can be organized. However, it conveys the important themes explored and the quality of work reported. It is largely atheoretical, and with very few exceptions has not benefited from theoretical developments in such related areas as small groups, decision making, exchange, coalition formation, and the like. Most of the studies represent descriptive case studies and results of simple demonstrations carried out and reported apparently with little or no awareness of these theoretical traditions. Furthermore, the literature exhibits conspicuous gaps, of which the following are important examples.

The Effectiveness of Teams

Among the primary, if not the most significant, objectives of teamwork and other approaches to the delivery of health care is enhancing the quality as well as the quantity of services. Most of the studies, however, concentrate on the dynamics of team relations, with such phenomena as cohesion, communication, and patterns of decision making being the most common dependent variables. Often, these variables are presented as measures for the effectiveness of teams. Several factors might have contributed to the lack of studies that test the effectiveness of teams in terms of the quality of care they provide. Difficulties in measuring the quality of care are well documented (e.g., Donabedian, 1966; Kessner et at., 1971; Birk et al., 1971). And problems of access to data might have constituted another barrier to the assessment of quality of care. Such studies are usually threatening to teams and therefore are resisted. For many advocates of the team approach, positive influence is considered as self-evident and needs no further verifica-

tion. Even if the superiority of team approaches over individual and sequential service arrangements is to be accepted on face validity, which in my opinion remains an open empirical question, comparative studies of teams are needed to determine the relative effectiveness of varying types and formations.

Patients' Reactions

It seems that not only members of a team would need to know about each other's fields, in order to coordinate their roles and functions, but that optimum services would require that patients in many types of practice settings have some understanding of the roles of the different professionals. In rehabilitation, psychotherapy, and preventive health practices, the cooperation, if not the participation, of patients and clients is essential for the effectiveness of such services. In view of the increasing specialization and proliferation of the health professions, it is important to assess the knowledge of patients, clients, and the public at large about these professions and to determine the influence of knowledge upon response to therapy. Participation in a social process implies complementarity of roles including those of patients and of persons who act on their behalf. Obviously, the issue is not that patients need to become specialists in the various health fields. Rather, the question concerns the type and amount of knowledge about a professional role prerequisite to appropriate interaction and response on the part of patients. Although the question is applicable to individual practices as well, it is particularly important to teams in which there is overlap in the domains and roles of professional members.

Gatekeeping Decisions

Differences among the professions in points of view, skills, and social positions are as manifested in gatekeeping decisions as in any other aspects of team operations. Gatekeeping decisions control the admission or rejection of applicants for services. Two patterns for the process of gatekeeping decisions have evolved, each of which entails serious limitations, thus creating the elements of a double bind. The *first* pattern is to assign gatekeeping decisions to the representative of a given field who becomes a "coordinator." Gatekeeping decisions under this arrangement may extend beyond the admission and rejection of applicants, to influencing the refer-

ral to other team members for services. In effect, coordinators become gatekeepers in relation to the other fields. Members of the other professions are brought into contact with the client when the coordinator detects a problem that requries their services. The limitation inherent in this model lies in the ability of a person with a given professional background to recognize problems that fall within the domains of other professions. Team approaches are based upon the assumption that clients' problems are complex and involve facets that can be better understood and ameliorated through specialized knowledge and skills possessed by various professions. To illustrate, can a social worker make differential diagnoses of physical conditions? Or, can a nurse take the place of a psychologist or a social worker in identifying emotional and social problems? Aside from these technical considerations, monopoly over gatekeeping powers by given professions is likely to foster resentment on the part of others.

The *second* pattern of decision making in interprofessional teams accords greater recognition to specialization and appeals more to democratic principles. Representatives of each profession on the team are given the opportunity to interview or examine patients and to determine the presence or absence of problems within their domains. The limitation of this model lies in the possible tendency for members of the teams to overdiagnose as a means for protecting their professional domains and demonstrating the significance of their services to the teams. In this way, the model tends to serve the interests of the team members more than those of the patients.

Manpower and Training

As has already been mentioned, division of labor, coordination of roles, and other factors in optimizing team performance require some familiarity on the part of members with the substance and methods of each other's fields. It is important also that students of health services learn about future roles in teamwork during their training. Such requirements can have much bearing upon the types of curricula, experiences, and training settings that would contribute to effective teamwork in health care. Principles of anticipatory socialization strongly suggest that new recruits be sensitized to teamwork during their professional training. These approaches are not prevalent in present curricula, especially those

of medical colleges. New products of these colleges know little about many of the health professions and less on how to utilize the skills of these professions in coordination with their own. Experimentation with new curricula and training experiences is greatly needed.

Another aspect of training not systematically addressed in the literature on teamwork is that of the numbers of people to be trained in the various health fields. The issue is one of manpower needs and production. Manpower policies in most Western societies, and certainly in the United States, are vague and largely inoperative. In the main, reasons for the lack of effective policies in this area are ideological. They relate to freedom in career choices in contrast to centralized planning and manpower mobilization. In the absence of manpower policies the need for health-services personnel and their availability become poorly synchronized. The inelastic supply-and-demand schedules of trained manpower contribute greatly to putting needs and availability out of phase. This inelasticity results from the long period of time required for mounting or expanding professional training programs and for training the needed personnel themselves. Once programs are built and students attracted to them, voluntary adjustments to contracting markets also become slow. Therefore, the supply tends to lag behind an increasing demand while health manpower markets are expanding. And, once the supply has risen to a high level, the overproduction continues out of phase with decreasing needs. Training funds for students and institutions have been used in the United States and other countries to stimulate the supply of trained personnel in the health fields. However, extending and withdrawing these funds have not followed well-planned policies, and the sudden availability and abrupt termination of such funds have caused considerable dislocations in educational institutions. In the absence of specific information on the types, units, and needs for the services of the various professions in relation to the incidence and prevalence of health problems, manpower policies will always be vague and ill founded. It is hoped that future research on teamwork in health care would seriously address these issues.

Summary and Conclusions

This paper outlined some of the trends believed to have given impetus to the development of team approaches in the delivery of

health care services and to concern over their performance. Among the factors cited are: the marked increase in specialization and division of labor as a result of expansion in health-related knowledge and technology, a corresponding emphasis upon co-ordination, the broadening concept of health and an increase in the types of activities included under its rubric, and manpower shortage especially in the highly trained professions.

An important objective in the paper was to systematize and re-view current literature on the subject. Themes prominent in the literature and discussed in this paper include: (1) status, power, authority, and influence among members of the team who represent different professions; (2) roles and professional domains; and (3) decision making and communication. Another objective was to identify some of the important dimensions that remain un-derstudied or largely unaddressed in the current literature. These include such issues as: (a) the effectiveness of teams as an ap-proach to the delivery of services, especially differences among teams with varying forms and compositions; (b) the modes of or-ganizing teams to deal with the problem of gatekeeping decisions which seem to constitute a structural dilemma; and (c) the relations of team approaches to manpower problems.

In the main, the task in this paper has been one of conceptual development, systematization of literature, and identification of neglected topics. The vast majority of the literature on teamwork is descriptive and prescriptive rather than analytical. Data are gen-erally generated from case studies with little theoretical orienta-tion. However, there are a number of important hypotheses that can guide future research into fruitful directions.

From a substantive point of view, available evidence indicates that team approaches developed in programs such as Maternal and Infant Care (M & I), Children and Youth Centers (C & Y), and neighborhood health centers address a number of limitations characteristic of conventional modalities for the delivery of health services. The comprehensiveness of services offered, and their em-phasis on prevention, is credited for a dramatic reduction of 50 per-cent in hospital admissions for children registered in these pro-grams within a period of four years (Lowe and Alexander, 1974:153). This decrease resulted in a reduction in the cost of care per child from $201.26 in 1968 to $149.82 in 1970. Furthermore, there was an increase of over 50 percent in the diagnosis of a "well child" or recall examination indicating considerable improvement

in the health of children who needed no hospitalization. Infant mortality rates were also reported lower for the M & I registrants in Richmond, Virginia, in 1969 than for the whole city (Tayback et al., 1973). Studies reporting these findings do not resolve the question of whether these favorable impacts are attributable to teamwork specifically or to the availability of health care in these centers in general.

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References

Beckhard, Richard
    1972   ``Organizational issues in the team delivery of comprehensive health care.'' Milbank Memorial Fund Quarterly 3 (July): 287-316.

Bergman, A. B., S. W. Dassel, and R. S. Wedgewood
    1966   ``Time-motion study of practicing pediatricians.'' Pediatrics 38 (August): 254-263.

Birk, Peter, Cynthia Dalton, and Thomas Ward
    1971   ``Problem oriented analysis of medical care episodes—a new evaluation model.'' 99th Annual Meeting, American Public Health Association.

Brodsky, Carroll M.
    1968   ``Communication and behavior on a small psychiatric unit.'' Comprehensive Psychiatry 9, 5 (September): 525-535.

Coser, Ruth Laub
    1958   ``Authority and decision-making in a hospital: a comparative analysis.'' American Sociological Review 23 (February): 56-63.

Crombie, D. L.
    1970   ``Group dynamics and domiciliary health team.'' Journal of the Royal College of General Practitioners 19 (February): 66-78.

Donabedian, Avedis
  1966   "Evaluating the quality of medical care." Milbank Memorial Fund
          Quarterly 44 (July): 166-206.

Eaton, Joseph W
  1951   "Social processes of professional teamwork." American Sociological
          Review 16 (October): 707-713.

Frank, Lawrence
  1961   "Interprofessional communication." American Journal of Public
          Health 51. 12 (December): 1798-1804.

Freidson, Eliot
  1970   Professional Dominance. Chicago: Atherton Press, Inc.

George, Madelon. Kazuvoshi Ide, and Clara Vamber
  1971   "The comprehensive health team: a conceptual model." Journal of
          Nursing Administration 1 (March/April): 9-13.

Hagstrom, Warren O.
  1967   Competition and Teamwork in Science. Final Report to the National
          Science Foundation for Research Grant GS657 to the University of
          Wisconsin (July).

Horowitz, John J.
  1970   "Dimensions of rehabilitation teamwork." Rehabilitation Record 10
          (March/April): 37-40.

Kessner, David M., Rashid L. Bashshur, and Carolyn E. Kalk
  1971   "A methodology for the evaluation of ambulatory health services: the
          development of the tracer concept." 99th Annual Meeting, American
          Public Health Association.

Lentz, Edith
  1950   "Morale in a hospital business office." Human Organization 9 (Fall):
          17-21.

Lewis, Jerry M.
  1969   "The organizational structure of the therapeutic team." Hospital and
          Community Psychiatry 20 (July): 206-208.

Lowe, Charles, and Duane Alexander
  1974   "Health care of poor children." Alvin L. Schorr (ed.). Children and
          Decent People. New York: Basic Books.

Nagi, Saad Z.
  1965   "Practitioners as participants in research." Rehabilitation Record 6, 4
          (1965).

Rogers, Kenneth D., Marry Mally, and Florence Marcus
1968   "A general medical practice using non-physician personnel." Journal of the American Medical Association 206 (November 18): 1763-1767.

Rubin, Irwin, and Richard Beckhard
1972   "Factors influencing the effectiveness of health teams." Milbank Memorial Fund Quarterly 3 (July): 317-335.

Seeman, Melvin, and John W. Evans
1961a   "Stratification and hospital care: I. The performance of a medical intern." American Sociological Review 26 (February):67-80.

1961b   "Stratification and hospital care: II. The objective criteria of performance." American Sociological Review 26 (April): 193-204.

Silver, George A.
1963   Family Medical Care. Cambridge, Massachusetts: Harvard University Press.

Simmons, Ozzie G.
1966   "Implications of social class for public health." Pp. 35-42 in J. R. Volta and E. S. Deck (eds.), A Sociological Framework for Patient Care. New York: John Wiley & Sons, Inc.

Somers, Herman Miles, and Anne Ramsay Somers
1961   Doctors, Patients and Health Insurance. Washington D.C.: The Brookings Institution.

Svarstad, Boni
1970   "Sociological factors affecting medical team-work." The Dr. Martin Luther King, Jr., Health Center Fourth Annual Report (January/ December): 26-40.

Tayback, Matthew, George Entwisle, Richard Hebel, Helene Hess, Mary McDill, Carmen Rottman, and Mary Young
1973   "Evaluation Studies on Maternal and Infant Care Projects." Report of Department of Social and Preventive Medicine, University of Maryland School of Medicine (September): 8.

Turk, Herman
1963   "Social cohesion through variant values: evidence from medical role relations." American Sociological Review 28 (February): 28-37.

Weissman, Herbert N.
1969   "The psychiatric team as a differential decision maker with child patients." Psychological Report 25, 1 (August): 11-17.

Wilson, Robert N.
   1966   "Teamwork in the operating room." In W. R. Scott and E. H. Volkart
           (eds.), Medical Care Readings in the Sociology of Medical Institutions.
           New York: John Wiley & Sons, Inc.

Wise, Harold
   1970   "Patterns of health care delivery." The Dr. Martin Luther King, Jr.,
           Health Center Fourth Annual Report: 5-25.

Zander, Alvin, Arthur R. Cohen, and Ezra Statland
   1957   Role Relations in the Mental Health Professions. Ann Arbor:
           University of Michigan Press.