



A Systematic Perspective on Health Manpower

Author(s): Harry A. Grace

Source: *Journal of Health and Human Behavior*, Vol. 6, No. 4 (Winter, 1965), pp. 234-238

Published by: American Sociological Association

Stable URL: <http://www.jstor.org/stable/2948640>

Accessed: 18-11-2015 12:08 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Sage Publications, Inc. and American Sociological Association are collaborating with JSTOR to digitize, preserve and extend access to *Journal of Health and Human Behavior*.

<http://www.jstor.org>

difficult for organizations possessing different types of characteristics, voluntary on one hand and quasi-legal on the other. Since the board members act voluntarily to enforce health laws through an organization established, at one time, along legalistic principles, it would be difficult to remove them through compulsory means.

The task of analyzing such organizations is not easy. One possible method is by investigating the internal and external stresses.

To achieve some understanding of these forces, one must analyze them in relation to the totality: the local scene as against the remoteness of the state, which is somehow defined as "out there"; the relative geographical isolation as against complete interaction with other towns and cities; the stability of the members of the local boards of health, which in this case can only be defined negatively, as against the freedom to express and plan.

A SYSTEMATIC PERSPECTIVE ON HEALTH MANPOWER

Harry A. Grace*

An Illness and a Health Model for health manpower are described. The Illness Model is appropriate for emergent situations, implies a hierarchy of functions, and encourages closure between statuses. The Health Model applies to preventive and investigative functions and discourages closure between statuses. Health manpower projections depend upon the model under consideration. Viewpoints on health manpower are suggested according to the various statuses within each model.

Health manpower is of national and world concern. Because health manpower includes so many persons with scientific training, its consideration falls within the broader category of scientific manpower problems. Generally, concern for manpower includes topics on recruitment, training, and utilization. Rather than begin with these topics, we shall first establish a systematic perspective on the field of health within which these and other topics may be analyzed.

In the following sections two traditional models within the field of health are described and compared. One model focuses upon the patient, the *Illness Model*, and the other focuses upon the entire person, the *Health Model*. Both models exist today. We do not imply that either model is *ipso facto* superior to the other, but that each model is appropriate to its task. We do imply, however, that the behavior appropriate to one model may be and often is totally, even fatally, inappropriate to the other. For instance, the *pro forma* communication in the Illness Model is appropriate to the solution of acute emergencies for which the informal communication, characteristic of the Health Model, would not only be inappropriate but perhaps fatal to the patient. Thus, we do not

imply that either model should be or should become the only model. We use the word "model" in the sense of a systematic approach toward understanding current behavior and predicting future behavior.

The particular models which we introduce describe relations between people who perform various functions. They are models of interpersonal behavior in an organizational setting. An organizational setting implies a hierarchy of functions; i.e., difference in *status*. In particular, we are concerned with the function each person performs in the model, the relation of his function to other functions of similar or different status, and the degree to which his function is closed or open to other personnel. For example, in the Illness Model, a person may function as a patient (i.e., have some illness). The patient is dependent upon the nurse, but the patient often has greater freedom than auxiliary volunteer personnel and members of the patient's family, whose movements may be restricted under the Illness Model because they do not hold patient status. In addition, the patient function is closed rather than open. That is, the patient wears identifiable clothing, resides in a demarcated area, and may be distinguished from other functions by visible bandages, wheel chairs, canes, and so forth. Thus, what we call *closure* has important effects on the functioning of a person who has become a patient.

*Chief, Laboratory for Applied Behavioral Science, Domiciliary, Veterans Administration Center, Los Angeles.

MODEL DESCRIPTIONS

Illness: Both the medical and administrative dimensions of the Illness Model are important (See Figure 1). In the Medical¹ dimension, each function represents a closed status with *pro forma* flow of support toward the surgeon. In the Administrative dimension, the functions are supportive of and subordinate to the Medical dimension, and so the flow of support, while formal, is not carried by status alone.

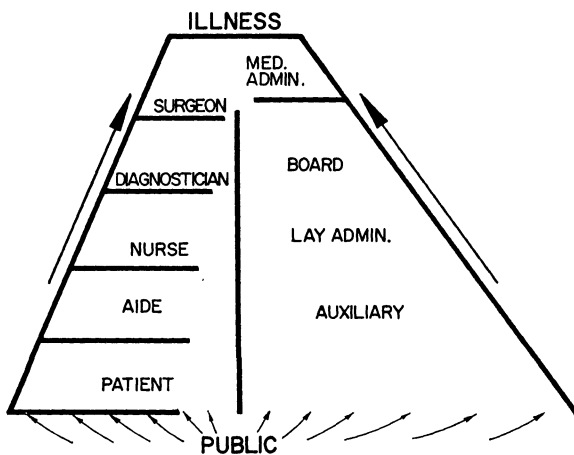


Figure 1

In both dimensions, the focus is upon Illness. The Surgeon represents a closed status whose function it is to take decisive action toward Illness. While many physicians take such decisive action, the Surgeon has come to represent this function most completely.

Before and after decisive surgical action, the Diagnostician functions in a corroborative manner. He determines the nature of the Illness, perhaps seeking or receiving technical information from ancillary personnel.

The Nurse represents those custodial and rehabilitative personnel who prepare the patient for decisive surgical action, or who follow such action with prescribed treatment for the patient. The Nurse directs effort toward the goals set by the physician. Subordinate to the Nurse may be Aides, who take their orders primarily from the Nurse.

The Patient, a person diagnosed as ill, has both the goal for the treatment of his Illness and the means for such treatment out of his control and in the control of personnel in the Medical dimension of the Illness Model.

1. We capitalize each term as it is defined and whenever it is so used in this paper.

Administratively, the Board includes persons who set general policy and who provide financial and moral support for the Medical dimension of the Illness Model. Often there is a Medical Administrator (perhaps a Chief of Staff) whose closed status allows him to be associated with the Surgeon or Diagnostician and so places him somewhat above the Board in relationship to Illness. The Medical Administrator, for instance, may contribute both to the determination of policy, a Board's traditional function, and to the direction of effort, primarily the function of an Administrator. The Lay Administrator, on the other hand, receives policy from the Board and concentrates primarily upon organizing effort on behalf of the Medical dimension. The Auxiliary may be composed of lay volunteers, families of Patients, or the Public.

Health: Dimensional differences also exist within the Health Model, but are more difficult to detect because they are not distinguished by closure. Within this model there is a broad commitment toward Health which does not offer as clear a focus as does Illness. (See Figure 2.)

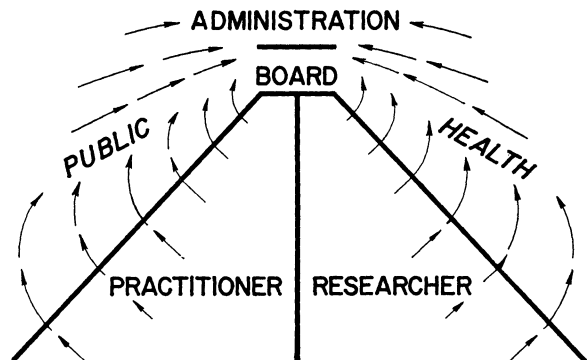


Figure 2

An individual leaves the Public to become a Patient and re-enters the Public after leaving Patient status. A member of the Public may often delay becoming a Patient such that his Illness becomes fatally complicated. And an ex-Patient may so resist rejoining the Public after Illness that his rehabilitation is seriously endangered.

The Health Practitioner includes medical and lay personnel of great variety. The Practitioner is in continual, direct, repeated contact and communication with the Public.

The Health Researcher also includes medical and lay personnel of many specializa-

tions. While some clinical research is done, most of the emphasis is upon laboratory and field research, including economic-geographic statistics. The Researcher is primarily concerned with setting, and evaluating progress toward, the goals of Health.

The Board in the Health Model again includes persons who set policy and provide financial and moral support. The Board may be more extensive than in the Illness Model, including as it does the various legislatures.

The Administrator's function in the Health Model is to coordinate all personnel toward the problems of the Public's Health.

MODEL COMPARISONS

In the Illness Model there is *pro forma* support for each status which is nearer to decisive action on Illness. Thus, support flows from the Patient through the Aide to the Nurse, to the Diagnostician and the Surgeon. Authority flows in reverse through the same formal channel. The Administrative dimension demonstrates less formal support for this flow, but considering its subordination to the Medical dimension, the focus is the same and the flow is insignificantly different. In the Health Model there is no one focus. There are Public goals and many Health goals, each of which captures some support. Flow tends to be diffuse. The flow is informal and dependent upon the leadership of the Board-Administrator in informing the Public about Health.

The Medical-Administrative interface in the Illness Model, in which the Medical dimension's closure maintains separation from laymen, demonstrates some conflict. The focus of all personnel upon Illness, however, suppresses much of the friction caused by closure and felt at this interface and throughout the closed interfaces within the Medical dimension itself. Less discernable is the Practitioner-Research interface in the Health Model. The customary absence of closure hides this conflict somewhat. However, personnel in the Health Model, torn between Practice with the Public and Research on Health, tend to demonstrate some random activity or loss in goal. With increasing closure in both Practice and Research, a similar conflict occurs at the interface between the closed Practice—Research specialties and the Board-Administration. Thus, interfaces which exhibit conflict exist in the Health Model, are disguised by the customary absence of closure, and are dis-

placed by the contemporary increase in closure.

The Illness Model tends to perpetuate itself. It increases closure within and between itself and the Health Model. Periodic emphasis is given toward reducing interface conflict within the Medical dimension and between it and the Administrative dimension. A primary effort is to encourage "administrative medicine;" i.e., the entrance of more physicians into the Administrative dimension. The Health Model exhibits a strong tendency toward increasing closure according to function. This includes epidemiology, school health, medical care, and so forth. In seeking closure, many Health personnel thereby imitate the Illness Model. The expectancy assumes that greater closure by function will promote the focus of all personnel toward a single Health goal. These tendencies toward closure represent the basically semantic division between the Public and Health. The concept of the Public offers a paradigm for the Practitioner of "people-to-be-helped." The concept of Health offers a paradigm for Research (as for the Board and Administration) of a "problem-to-be-solved." *Public Health* therefore means people-with-problems. However, personnel in the Health Model understandably solve their semantic and organizational conflicts at the smallest functional unit, enclosing themselves, and finding a goal internal to their own function rather than in the semantic paradox of Public Health. That the effect of these closures is to imitate and subordinate to the Illness Model is unforeseen by many Health personnel, although concern for manpower highlights this very effect.

BASES FOR MANPOWER DATA

The bases for manpower data, and therefore for manpower projections, depend upon the model under consideration and one's function or status within the model. In the Illness Model, manpower needs are determined by the amount of Medical-Administrative time required for each Illness. Given the extent of an Illness, manpower needs may be predicted from information on the amount of time which each Medical specialization must spend with a Patient having that Illness. Work loads will vary according to the personnel in each function and also by the Illness under consideration.

Health Model manpower data suggest two other bases. The Practitioner's, based upon

Public contact, depends upon the Practitioner-to-Public ratio. (There may be ratios, as in the Illness Model, for different Illnesses according to different Health functions.) The Practitioner deduces that, to maintain the constant ratio, Health manpower must increase as the Public population increases.

Another basis for Health manpower develops from Research. From this viewpoint, Health manpower will decrease as a function of increased technological advance. The question is, given the equitable distribution of cybernated technology, what manpower is required to develop, maintain, and evaluate the technology.

The plethora of statements about manpower problems and their solutions is bewildering, unless these statements demonstrate systematic perspectives. Statements may be understood according to the model which gives rise to them and the function within the model of the person proposing the solution. In the Illness Model, we consider hypothetical statements from persons conscious of closure.

The Illness Model with a manpower deficit at a higher status or at an equivalent status but in the Medical rather than the Administrative dimension:

"This deficit may be solved by closer cooperation with us at our status. They should delegate more authority to us. To reduce their manpower deficits, they should offer us greater cooperation. They are now performing functions which can readily be delegated to us, without any reduction in the present or future quality of their functions."

The Illness Model with a manpower deficit at one's own level of status in either dimension:

"The manpower deficit in our function cannot be solved by delegating our function to others. Deficits in our function raise the question of *quality*. Solutions to deficits at our level demand a fresh approach to the recruitment of persons who will guarantee the maintenance of quality in our functions."

The Illness Model with a manpower deficit at a lesser status or at an equivalent level of status but in the Administrative rather than the Medical dimension:

"The deficit in that lesser function than ours can be solved by training personnel to perform responsibly. Auxiliary personnel, with training, can greatly reduce manpower deficits in that function. There is also evidence that greater efficiency and manpower savings may occur in their function by the utilization of advanced technology."

The Health Model expresses the Practitioner, the Researcher, and the Board-Administrative points of view. From the Practitioner's viewpoint:

"The population gains on us daily. Manpower deficits can be reduced by retraining Research personnel for utilization in Practice, and recruiting better (not more) Board-Administrative personnel while continuing to educate them in the day-to-day demands of the Public."

From the Researcher's viewpoint:

"Research knows what Health is and what it is not. Research offers to reduce manpower deficits by developing and testing technological advances communicated directly to the Public and utilizing a minimal number of Practitioners. The Board-Administrator can both lead Health personnel and reduce manpower deficits by putting Health *before* the Public, literally and figuratively; that is, by letting Research determine the goals for Practice."

From the Board-Administrator's viewpoint:

"Two problems confront us which contribute toward manpower deficits. First, each association of Health personnel closes itself, defends its function, and determines manpower deficits by lobbying for restricted recruitment, specialized training, and limited utilization of its personnel. Second, while it is necessary to prepare members of the Public for possible Illnesses and to enable the Patient to return to his place in the Public, the Public viewpoint is increasingly becoming a Patient viewpoint. Manpower productivity and morale are adversely affected by the closure which specialization of function and imitation of the Illness Model bring about."

CONCLUSIONS

We have set two models for health manpower within the broader concern for scientific manpower, which is, in turn, a subcategory of consideration for manpower prospects within this nation and the world. In many circumstances, within much of the United States and throughout most of the world, the Health Model is most appropriate, *provided that there is a stand-by Illness Model to act as a crisis task-force.*

Hypotheses for either model can be generated by this systematic perspective. Concomitantly, demonstration projects may be undertaken which apply these perspectives and evaluate their different consequences on illness, the public, and health.

Were such to have been completed, these models might have been tested and might have been improved. But the health system itself would not have been exercised nor would its manpower problems have been

modified. Fortunately, we have both the experienced personnel and the technological capacity to construct a Manpower System, exercise it, and train personnel by it. We do not have to accept partial fulfillment from the testing of one or another minuscule model when complete fulfillment from the testing of the entire Manpower System is available.

We therefore propose that these two models of Illness and Health be accepted as a basis for the logical programing of a computer-based Manpower System; specifically, the Health Manpower Subsystem. Design of an appropriate system will require empirical research to tie down each proposition in the computer program. Programing will permit simulation of these two models with-

in the comprehensive Health Manpower Subsystem. With simulation, we can modify parameters (e.g., Illness, Health, the Public, closure, ratios, and so forth) and determine their consequences; e.g., how Social Security or the Engineering Manpower Subsystem affects health manpower. Furthermore, the simulation will provide a vehicle by which to train personnel for functions appropriate to health which we cannot now predict or comprehend.

In summary, because neither illness nor health respects the closure offered by artificial boundary lines, a computer-based system for health manpower simulation may very well become the entering wedge toward a comprehensive, world perspective on manpower.

FACTORS RELATED TO BEHAVIOR IN LABOR*

Charles E. Werts,‡ Sprague H. Gardiner,† Karen Mitchell,† Janet Thompson,† and Gertrude Oliver†

Fifty-two normal primiparae were observed in labor by a research nurse who kept a running record of behavior and events. These protocols were used to obtain objective scores on various labor behaviors. The first factor in a factor analysis of these scores corresponds closely to clinical judgments of "difficulty" of labor. Employing the Simon-Blalock system of theoretical analysis, a network of nine variables was constructed which indicated that this factor had "real" relationships to length of labor and amount of education, and spurious correlations with several other social variables.

In recent years a number of investigators have studied the relationship of difficulty of labor to a variety of psychological variables.^{1, 2, 3, 4} The findings have often been confusing or ambiguous, partly because "difficulty" of labor has not been defined in terms of specific patient behaviors, but in terms of clinical judgments. These studies also may be unclear because of failure to evaluate the role of sociocultural factors

which might account for much of the observed behavioral variance. Specifically, a variety of studies of the relationship of socio-economic status to patient role-perception suggested that behavior in labor should be heavily influenced by similar forces. Furthermore, it was expected that the difficulty of labor would also be affected by "physical" factors such as type, amount, and timing of medication; pregnancy weight gain; height; weight; length of labor; size of baby; gestational age and timing or type of induction procedures (if any).

With these considerations in mind, the present study was designed first of all to specify the patient behaviors used by hospital personnel in making judgments about the difficulty of labor and secondly to study related social and physical factors. Section I below describes how the first goal was accomplished and Section II indicates the basis for selecting social variables and interpreting their relationship to difficulty of labor. Because the physical factors were found to be uncorrelated with both the social factors and difficulty of labor, these data were deleted from further consideration.

*The study reported in this article was supported by a grant from the National Institute of Neurological Disease and Blindness of the Public Health Service, PHS B-3558.

‡Research Div., National Merit Scholarship Corp., Evanston, Illinois.

†From the Department of Obstetrics and Gynecology, Indiana University Medical Center.

1. Karchner, F. D., "A Study of Emotional Reactions During Labor," *Amer. J. Obst. : Gynec.*, 60:19-29, 1950.

2. Klein, H., H. W. Potter, and H. Dyk, "Anxiety in Pregnancy and Childbirth," *Psychosomatic Med. Monographs*, New York, Paul B. Hoeber, 1950.

3. Newton, N., "Maternal Emotions," *Psychosomatic Med. Monographs*, New York, Paul B. Hoeber, 1955.

4. Zemlick, M. J., and R. J. Watson, "Acceptance and Rejection During and After Pregnancy," *Amer. J. Orthopsychiatry* 23:570-584, 1953.