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ABSTRACT

The necessity to adjust to changing circumstances constitutes a motivating force for learning. Implementation of the legislative change in Medicare reimbursement in the United States requires change on the part of the health care system and adaptation by the individuals within that system. Two studies examined ways health care professionals in the areas of finance, medical records, nursing, and social services sought to understand and cope with related change resulting from the new legislation on reimbursement. In the first, a survey of 500 professionals received 213 responses. A follow-up study obtained information from 96 of the 213 original respondents. Because adult and continuing education is increasingly being applied to facilitate the adjustments required by changing circumstances, the findings of the study can be a contribution to both theoreticians and practitioners who find themselves in similar change situations. It was found that most approaches used, including related learning activities and sources of assistance patterns, serve the reestablishment of the status quo and result in little or no change in the functionality of role behavior. (Three tables and 27 references are included.) (Author/NLA)

PATTERNS OF LEARNING RELATED TO ADAPTING TO CHANGE: A STUDY OF FOUR HEALTH CARE OCCUPATIONS IN THE UNITED STATES

by KENNETH E. PAPROCK

ABSTRACT

The necessity to adjust to changing circumstances constitutes a powerful motivating force for learning. Implementation of the legislative change in Medicare reimbursement in the United States potentially requires change on the part of the health care system and adaptation by the individuals within that system. This research examines ways health care professionals sought to understand and cope with related change resulting form the new legislation on reimbursement.

Since adult and continuing education is increasingly being applied to facilitate such adjustments, the findings of this study can be a contribution to both theoreticians and practitioners who find themselves in similar change situations. It was found that most but not all approaches used, including related learning activities and sources of assistance patterns, serve the reestablishment of the status quo and result in little or no change in the functionality of role behavior.

PATTERNS OF LEARNING RELATED TO ADAPTING TO CHANGE: A STUDY OF FOUR HEALTH CARE OCCUPATIONS IN THE UNITED STATES

In the face of anomalies created by alterations in societal, economic, political, and professional values, norms, and expectations, individuals are being required to perform "paradigm shifting" (Dunn, 1971; Toffler, 1971; Starr, 1982). For the individual professional, such changes often demand significant reform in the nature of one's practice or in the very way in which one views the field (Paprock, 1986, 1988). Such changes can cause a profession to make profound alterations in its delivery system or even to reconceptualize its collective mission (Houle, 1980). Adult and continuing education is increasingly being applied to facilitate such change. One such change affecting health care is the Social Security Amendments Act of 1983. This began the radical restructuring of the payment system to hospitals for Medicare inpatient services in a way that has long-term consequences for patient care in the United States (Starr, 1982). This prospective rate-setting concept is based on diagnostic related groups (DRGs). A DRG is a grouping of direct patient cost data determined by the diagnosis, treatment, and age of a patient. According to Thompson (1981) the intention of this legislation puts emphasis on cost efficiency. This system was to be phased in over a three year period beginning October 1983. It was anticipated that hospitals would be on 100% DRG reimbursement by 1987 based upon a national urban and rural rate.

According to Bays (1980) this method of Medicare reimbursement has broad implications for the financial stability and internal organization of hospitals. Hospitals question whether they can realize a surplus at the fixed Medicare reimbursement prices (Coddington, Palmguist and Trollinger, 1985). Moreover, the tenor of this legislation is also disconcerting to health care professionals who believe that efforts to minimize costs challenge the ethic of doing everything to help the patient.

The legislative change in reimbursement for Medicare inpatient services is part of the environment external to the institutions. The characteristics of the external environment and how hospital

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personnel perceive them can affect role behavior and adaptation to new roles and/or situations. Environments can range from placid to turbulent (Emery and Trist, 1965, 1973; Katz and Kahn, 1978). Just as the external environment can range from placid to turbulent, the internal environment (i.e., the institution) can show a variance.

Watzlawick, Weakland and Fisch (1974) have described the variances in terms of first-order and second-order changes. First-order change involves a variation that occurs within an agency system which itself remains unchanged. Internal and external forces are nearly in equilibrium. Individuals in organizations continue to run such organizations in pretty much the same way. Second-order change involves a variation whose occurrence changes the system itself. In second order change the organizations retain their identities yet are transformed into something new. Starr (1982), Butler, Bone and Field (1985), and Weinberg (1985) seem to indicate that the intent of the Medicare legislation is second-order change.

The necessity to adapt to changing circumstances constitutes a powerful motivating force for learning. Aslanian and Brickell (1980) have referred to these changing circumstances, such as DRGs, as "trigger events." Under such circumstances adaptation through assimilation or accommodation is a pressing issue for those affected (Petrie, 1981; Farmer, 1983).

In examining efforts on the part of hospital personnel in understanding and coping with DRGs, potentially an infinite number of factors could be taken into consideration. These factors can work in a force field as facilitating or limiting change (Lewin, 1951). Through a review of the literature, interviews with hospital personnel, and transactive seminars, factors were identified as potentially the most important to be examined, and these were classified as outcome factors, situational factors, and process factors.

These factors were operationalized as attribute and active variables. According to Kerlinger (1973), an attribute variable is one that cannot be manipulated. In these studies, it was defined as a given in a hospital employee's role and situation. Examples would be hospital size, percentage of Medicare patients, and the like. An active variable is one that is actively manipulated by an individual to

bring about an outcome. An example of an active variable would be a variety of learning activities a person uses to bring about related change.

Variables

Implementation of DRGs potentially requires change on the part of the health care system and adaptation by the individuals within that system. In this circumstance, hospital personnel perceive themselves as being able to do their professional work more or less well. According to Katz and Kahn (1978), an individual's recurring actions as interrelated to those of others constitute one's role behavior. For hospital personnel this concept relates to their work within their institutions.
resultant state of the adaptation process, that is how well one is able to adapt or adjust within the situation, refers to the functionality (Levy, 1968) of one's role behavior.

Hospital personnel can use a variety of approaches in deciding whether or not to change their professional rc'es and in adapting to new ones. Based on his research of 450 professionals, Farmer (1983) has identified three quite different approaches that professionals can take in understanding and adapting to change and calls these the Three Foci Models.

According to Farmer, Model I focuses first and foremost on needs, interests, and/or content. Model II focuses on specific task or problem-solving efforts. The third focuses on a difficulty (Model IIIa) or an anomaly (Model IIIb). Model IIIa and IIIb imply the need for a person and/or an adult educator to focus on change, and for the person to adapt to a situation through assimilation or accommodation accordingly.

Petrie (1981) defines assimilation as a "fine tuning" process in which people modify their experience to fit into current conceptual schemes. To assimilate they change their experience to deal with a disturbance that enters their lives but remain in virtually the same mode of conceptualizing about and dealing with themselves and the world.

Accommodation, according to Petrie, is the process of radically changing one's conceptual schemes and actions to understand and cope with the new or different situation. Individuals generally approach these as anomalies (i.e., disturbances wh ich resist all efforts to assimilate adequately.

Hospital personnel can use a variety of individuals and groups such as administrators, colleagues, and professional associations to assist in changing roles and adapting to new ones. Carl Rogers defined a helping relationship as one "... in which at least one of the parties has the intent of promoting the growth, development, maturity, improved functioning, improved coping with life of the other" (1961, pp.39-40). Sometimes individuals seek to understand and cope with change autonomously (i.e., without the help of one or more others). In doing so, they may engage in self-directed learning activities with the person acting as his or her own source of assistance. These sources can facilitate, hinder, or have no effect on professional role development (Knox, 1977).

Research

Two studies (Paprock, 1988) examined the relationship between (a) change in perceived functionality of role behavior; (b) occupational roles; (c) learning approaches used by hospital personnel; and (d) related variables identified as potentially facilitating or limiting to efforts by hospital personnel to understand and cope with DRGs.

The first study (Paprock, 1986) was conducted between Fall 1983 and Spring 1984. Four health care occupations were identified as being immediately affected by the legislative change. These were in the areas of finance, medical records, nursing, and social services. In the initial phase interviews of persons representing these four occupations were conducted and a nationwide questionnaire was developed and mailed to 500 health care professionals. Two hundred and thirteen responded.

In the follow-up study conducted between October and December 1987, the questionnaire was again sent to the 213 respondents. Out of these 127 responses were received, but only 96 were obtained from the same respondents of the earlier survey. The others had obtained positions in the surveyed hospitals since the initial research. A comparison of respondents appears in Table 1.

TABLE 1

FREQUENCIES AND PERCENTAGES OF RESPONDENTS CLASSIFIED BY OCCUPATIONAL ROLE

	1984		1987	
Role	Frequency	Percentage	Frequency	Percentage
Finance	42	19.7	14	14.6
Nursing	35	16.4	19	19.8
Medical Records	60	28.2	28	29.2
Social Work	64	30.8	35	36.5
Other	12	5.6	0	0.0
Total	213	100.0	96	100.0

Both studies were set up to ask: What is the simple correlation between frequency distributions on a two- to four-point scale and to report the level of significance of that association given n numbers involved in each of the distribution arrays. Also, what is the nature and extent of change in perceived functionality of role behavior which appears as similar distributions and to determine the significance of those changes. Quantitative variables were blocked and recorded using contingency tables and associated phi scores to examine the significance of association between variables. Paired t-tests were used to determine if there were differences between the mean differences of outcome variables from the initial study and the follow-up.

Since these studies used Strong Inference (Platt, 1964), each of the individuals who was faced with this situation calling for understanding and coping with a particular type of change. Respondents were given three or four alternatives from which to choose regarding what he or she did or under what circumstances what was done occurred.

Findings and Observations

It was found that the majority of hospital personnel experienced no change in perceived functionality of role behavior as the result of the implementation of DRGs and the efforts of personnel to

adapt to them. Table 2 shows the frequencies and percentages of changes in perceived functionality of role behavior.

TABLE 2

FREQUENCIES AND PERCENTAGES OF GENERAL CHANGES IN PERCEIVED FUNCTIONALITY OF ROLE BEHAVIOR

Change Code	-3	-2	-1	0	+1	+2	+3	No Res.	Total
1984									
Frequency		1	17	144	44	2	1	4	213
Percentage		.5	8.0	67.6	20.7	.9	.5	1.5	100.0
1987									
Frequency	1	2	20	48	20	1	1	3	96
Percentage	1.0	2.2	20.8	50.0	20.8	1.0	1.0	3.2	100.0

Also, it was found that the efforts of hospital personnel to understand and cope with DRGs were largely types of reception learning or self-directed learning appropriate to making little or no substantive changes in knowledge, attitudes, skills, or performance.

Very few hospital employees in these studies used the third model of the Three Foci Models which focuses on the need to adapt to a situation classified as a difficulty or anomaly. This is somewhat surprising in the light of Butler, Bone and Field's (1985) finding that the implementation of DRGs tended to result in a potentially anomalous situation for hospital employees. If hospital employees had used an Anomaly-Based approach, they would have initially identified their situation as anomalous and sought to accommodate their jobs and how they perform them to new expectations and new realities under DRGs. The approaches used (i.e., content focused and specific problem or task focused) most likely are not the approaches to use in helping individuals classify an anomaly and treating it as such. Approaches used by respondents are shown in Table 3.

TABLE 3

FREQUENCIES AND PERCENTAGES OF RESPONSES INDICATING APPROACHES TO ADAPTATION; THE THREE FOCI MODELS

	I	II	IIIA	IIIB	No Response	Total
1984						
Frequency	134	10	52	14	3	213
Percentage	62.9	4.7	24.4	6.6	1.4	100.0
1987						
Frequency	49	19	17	8	3	96
Percentage	51.0	19.8	17.7	8.3	3.1	100.0

Public interest in the rising costs of health care has been present in newspapers, magazines, and journals for several years. Consequently, those hospital personnel in finance positions have become more visible and influential in decision making. Finance personnel have received extensive recognition for the past several years and this has continued after DRGs (phi=.336, p= <.05). Those in finance roles had experienced high status before DR&s, and this high status has not been altered as a result of the change in Medicare reimbursement (phi=.244, p= <.01).

Even though changing circumstances from the change in Medicare reimbursement potentially affected the scope of responsibilities of hospital employees, those in finance roles did not indicate an increase or decrease in the scope of their duties or "no change" (phi=.251, p= <.05). They had broad responsibilities in the past (phi=.216, p= <.05) and continued to have broad responsibilities after the implementation of DRGs (phi=.196, p= <.05).

In reporting the findings of the initial study, Paprock noted that nurses reported that the articles and presentations about DRGs tended to be filled with unfamiliar terminology to which they were not trained or accustomed. They avoided learning activities that were thought to expose them to such unfamiliar and difficult information to understand about DRGs. Moreover, they experienced insufficient pressure from the internal environment of the hospital to create a "trigger event" which would lead them to engage in alternative learning patterns about DRGs. Since that time it would appear that the

implementation of DRGs has lead to increased responsibilities for nurses (phi=.303, p= <.05) while maintaining the same level of job knowledge (phi=.500, p= <.01). Nurses indicated that they held only moderate status before and after (phi=.208, p= <.05) the implementation of DRGs.

In the earlier study it was found that the social service role was not seen as being initially related to the change in Medicare reimbursement. Interviewees indicated that social service personnel were not typically the initial ones sent to conferences, workshops, and seminars about DRGs, and those who went tended not to find them helpful in learning about DRGs and how to cope with them.

Individuals in social service in both the first and follow up studies saw themselves as knowing what to do to perform their jobs before and after DRGs (phi=.398, p= <.05). However, in the first study they saw themselves as having an increase in the scope of duties in their professional roles as a result of DRGs, but in this follow up study they now see themselves as having a decrease in these responsibilities (phi=.309, p= <.01). This finding indicates a change from the early literature and interviews at an early stage of DRG implementation. At that time it was seen that the role of social service had increased in relation to preadmission and discharge planning which is a key component in implementing this Medicare reimbursement system. Now that the system of reimbursement has been in effect a few years it may be that these functions were being accomplished before, during and after the Medicare change which have not resulted in an increase of duties for social service personnel.

It was also found that after three and a half years under the Medicare reimbursement system social service personnel in hospitals are experiencing a sufficient dynamic in the external environment of their hospitals (phi=.232, p= <.05) and are having difficulty adapting to the changes. Consequently they have used a Modal IIIa, Difficulty-Based approach (phi=.231, p= <.05), in an attempt to reconcile using their apparently successful previous duties under these new and changing circumstance. It is possible that these individuals experienced difficulty in assimilating previous duties to the changing circumstances and see themselves as not having been able to do their jobs as well as required (phi=.247, p= <.01).

Findings from the followup study are consistent with earlier observations of medical records personnel reported in the initial study and are supported by statements in the literature; namely, that

metaphorically, and sometimes in reality, the medical records departments have moved from the basement to the top floor of hospitals as a result of DRGs. DRGs place a premium on keeping accurate and sufficient records in a form which is required for reimbursement under DRGs and which permits as favorable a return for medical services as is allowable under DRGs.

Medical records personnel were not found to evidence a lack of necessary knowledge to do their jobs under DRGs (phi=.544, p=<.01). They also indicated that they have been able to continue to do their jobs well (phi=.289, p=<.01) in spite of the increase in responsibility (phi=.223, p=<.05). Indications are that medical records personnel have been able to assimilate related changes in their roles and adjust to the changing circumstances.

It was also found that many of the respondents control the ways in which not only they but other hospital personnel are encouraged and financed for understanding and coping with DRGs and similar phenomena. To the extent that the approaches, learning methods, and sources of assistance (i.e., content focused approach, self-directed, and reading) may be inappropriately encouraged and financed, the hospital personnel may be doing their organizations, other employees, and ultimately themselves a disservice. The approaches to learning and adapting to such change, related learning activities, and mentoring patterns used to understand and cope with DRGs were found largely and perhaps inadvertently to serve the reestablishment of the status quo. That is, to result in little or no change in perceived functionality of role behavior. This may be working against or in opposition to the intent of the legislation.

This is a somewhat surprising finding since the original intent of the DRG regulations seems to have been to bring about major change in the health care system and in the roles within that system (Starr, 1982). This puts in question the extent to which largely self-directed, content focused approaches to continuing professional education contribute to efforts to bring about societal and organizational reform.

changes in related job knowledge and related job skills did not associate with any other variable. However, in comparing data of the two studies there was a statistically significant difference for change

in related job knowledge (t=3.30, df=90, p=<.001) and related job skills (t=4.12, df=91, p=<.001) as a result of the implementation of DRGs. A possible explanation of this find is that most practical knowledge adults acquire is tacit (Polyani, 1976; Sternberg and Caruso, 1985; Boucouvalas, 1987). Its form is unspoken, and it is not directly taught. This difference in related job knowledge and skill may exist by the respondent's "doing" and from trial and error.

Summary

Creative efforts must now be used to improve productivity while sustaining quality health care services. It has been argued philosophically that DRGs adversely affect quality of services. This may be true under the traditional definitions of services, but according to Martin (1985), there needs to be a redefinition of services and the roles that provide these services. The Medicare legislation seems to have been intended to bring about this major change.

The approaches used to adapt to change, related learning activities, and sources of assistance patterns used by hospital personnel to adapt to DRGs were found to result in little or no change in perceived functionality of role behavior. This may well be working against or in opposition to the intent of the legislation. A comparison of the data gathered at a very early stage in the legislative change and the data of the follow-up study three and a half years later shows that there has been no significant difference in this finding with the exception of a marginal increase in functionality of role behavior indicated by medical records personnel.

It may well be that in some settings and for some hospital personnel, such as medical records personnel, the change in Medicare reimbursement can be handled through assimilation. In those settings and for such personnel only minor adjustment is all that it takes. They are able to adapt by making minor adjustments in the way they were trained to view their work and to do it.

However, in other settings and for other hospital personnel, such as those in social service roles, the implementation of DRGs can call for accommodating how they view their work and go about doing it. For them assimilating the change into what they have been doing may cause difficulty.

It seems likely that acquiring content such as information concerning a difference in reimbursement for Medicare services does not necessarily result in a change in performance. Content awareness does not bring about this performance change; it can only provide choices for the individuals involved. Here the efforts to adapt to DRGs were largely focused on content and sources of assistance were generally colleagues and self. These efforts were appropriate to making little or no changes in job knowledge, job skills, or performance. The marginal increases in knowledge and skills over time most likely were due to the individual's experience with actually working with the new system.

Such findings from both these studies seem appropriate to the extent that minor adjustments through assimilation may be all that is required to adapt to DRGs. However, Butler et al (1985) suggested that the implementation of DRGs may leave hospitals in anomalous situations and require hospital personnel to redefine their roles and accommodate to the new realities under DRGs.

To the extent that a redefinition of services and roles seems to be the case, hospital personnel may well need to use an approach to learning focusing on adaptation and not an approach which focuses on content or a specific problem or task. In doing so it may be necessary for them to identify mentors or guides who understand how to help individuals cope with anomalies and to not merely encourage and implement a content focused approach.

It would appear that maintaining the status quo or creating no change in knowledge, attitudes, skills, or values is not the appropriate response to the rapid rate of change in health care. Environmental changes are placing pressure on administrators and educators as well as on persons occupying roles such as those in health care to respond accordingly. If adult and continuing education is done to bring about changes in the individual and/or the social system of which he or she is a part, then an examination of organizations and educational programs which appear to be committed only to serving the survival and maintenance needs of social structures seems called for. It is likely that additional research that is designed to contribute to what is known more generally about the relationship between adaptation and related learning activities is needed.

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