

CHANGE AND INNOVATION IN HOSPITALS:

THEORY AND PRACTICE

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ABSIRACT

Organizational change within a hospital setting, specifically the development of a pharmacy based clinical pharmacokinetic dosing service, (CPDS), is examined. An organizational model is presented which will help to predict the success and acceptance of this new service in other organizational settings. General characteristics of organizations and comprehensive review of organizational theory and organizational behavior are presented to establish a theoretical framework for understanding organizational change. A discussion of the classical organizational theorists, factors involved in individual and group behavior, organizational structure, and organizational change are included. The study of hospitals as organizations is discussed.

The CPDS case study model is developed by focusing on Hurley Medical Center and the department in which the service was developed. Hurley Medical Center's organizational characteristics which impacted on the program's development is discussed.

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CHANGE AND INNOVATION IN HOSPITALS: THEORY AND PRACTICE

Hospitals operate in a complex and dynamic environment. Hospital administrators must respond to changing laws and regulations, they must meet accreditation standards, keep abreast of scientific and technological advancements and adapt to new and innovative reimbursement systems. Above all, hospitals are expected to provide high quality health care.

Today, most health care takes place in an organizational setting, such as proprietary hospitals, health maintenance organizations, not for profit and Federal hospitals, preferred provider groups or many others. An understanding of these health care settings is greatly enhanced by an understanding of organizational theory. Organizational theory is particularly essential in promoting an understanding of how change and innovation occurs within these organizations.

This paper will examine organizational change within a hospital setting; specifically the development of a pharmacy based clinical pharmacokinetic dosing service (CPDS). An organizational model is presented which will help to predict the success and acceptance of this new service in other organizational settings.

General characteristics of organizations and comprehensive review of organizational theory and organizational behavior are presented to establish a theoretical framework for understanding organizational change. A discussion of the classical organizational theorists, factors involved in individual and group behavior, organizational structure, and organizational change are included. This paper then focuses on hospitals as formal

organizations and discusses the study of hospitals as organizations.

The CPDS case study model will be developed by focusing on Hurley Medical Center and the department in which the service was developed. This paper will then describe Hurley Medical Center's organizational characteristics which impacted on the program's development.

ORGANIZATIONAL THEORY

To begin the discussion of organizational theory, the classical organizational theorists are presented. Woodrow Wilson's essay "The Study of Administration", 1887, developed the idea of a separation of politics and administration which should operate outside the political process. The major conceptual decisions were made by the politicians while the everyday operating decisions were made by the administrators. Besides separating these into two areas, Wilson was also professing public administration as a separate discipline for the first time. He felt that even though government systems may differ, the principles of good administration can be evenly applied, "...there is but one rule of good administration for all governments alike."¹ For Wilson "good administration" took the form of a hierarchically ordered system of ranks staffed by trained specialists. The result is efficiency of work tasks in terms of time and cost.

The belief in a hierarchy of structure leading towards efficiency continued with Frederick W. Taylor's theories on scientific management. "Taylorism" as it became known, was based

on the idea that there is "one best way" of accomplishing a task.

"...the principles of scientific management when properly applied, and when sufficient amount of time has been given to make them really effective, must in all cases produce far larger and better results, both for the employer and the employees,..."²

The impact was that employees were essentially treated as extensions of the machinery to be exchanged and replaced as needed by management. Taylor compared his scientific management approach to that of a "first-class American baseball team".² The best way of doing each action is through thorough study of the action and having the players well coached and trained. According to Taylorism, every player "obeys the signals or orders of the coach [ie. management] immediately."² It is this close "cooperation" between all team members which typifies the scientific management approach.

The strength of Taylorism lies in the fact that activities are reduced to their lowest level of simplicity. Job tasks are well defined resulting in higher organizational productivity. Taylorism fails as a comprehensive model because it does not account for the monotonous nature that job specialization creates with it's accompanying alienation from work.

Consistent with Wilson's theories of administrative structure and with Taylor's scientific management approach, are Max Weber's theories on bureaucracy published in 1922. Weber professed that bureaucratic forms of organization are superior to other organizational structures because they offer many attributes leading to efficiency. The bureaucratic organizational model sets job performance standards and the "authority structure" to compel them. These powers are derived from rules such as laws and

administrative regulations.

As with Taylorism, Weber's theory does not account for the individual within the organization. Employee creativity and innovation are stymied and the social structures within organizations are ignored.

The general theories of organization continued to progress with Luther Gulick's "Papers on the Science of Administration" in 1937. Gulick begins by reasserting the need for the coordination of work and specialization by the division of labor. Coordination however is achieved by a single directing authority which he calls the unity of command. The organization should allow a single directing authority to coordinate all of the subdivisions of work so the goal of the organization can be achieved efficiently. As Gulick studied the role of this single directing authority he found seven common activities. These are planning, organizing, staffing, directing, coordinating, reporting, and budgeting, or "POSDCORB". Organizational objectives could best be met if the structure of the organization was broken down into these fundamental areas.³ When this is applied to public administration at the various levels of government the traditional hierarchical structures breaks down in favor of a "lattice-work" design. The lattice-work structure then accounts for the purpose being served, the process being utilized, the clientele being served and the place where the services are rendered."⁴

Congruent with the principle of unity of command was another Gulick concept, the "principle of homogeneity." He states that for technical efficiency to exist, work must have a common goal. Combining heterogeneous tasks contributes to organizational

inefficiency, "...combining water supply and public education", for example, because they are functions too diverse to be managed effectively.

A major turning point in administrative thinking took place in 1946 with Herbert Simon's, "The Proverbs of Administration." He suggests that there is not a science of administration nor any scientific principles for that matter because for each administrative principle, there exists an equally plausible and acceptable contradictory principle. Simon's essay challenges four such scientific management principles. They are, specialization, unity of command, span of control, and organization by purpose, process, clientele, and place, (ie. the lattice structure).

Regarding specialization, Simon asks, is administrative efficiency really increased by an increase in the specialization of the task? For Simon, the real problem of administration is not to specialize more but to specialize in a particular manner which leads to administrative efficiency.

Unity of command, and the one-master theory, maintains that efficiency is maximized by determining hierarchical authority. However Simon contends this is incompatible with his rule of specialization. Decision making authority is most effective when it is placed with the experts capable of making such decisions, not necessarily those on the hierarchical ladder. Therefore in actual situations authority is zoned, and specialized knowledge will determine outcomes while organizational structure will be subordinated.

The principle of span of control, ie. limiting the number of employees a supervisor must manage, conflicts with another

scientific management principle which says the number of administrative levels should be minimal. Too much emphasis on span of control results in greater numbers of hierarchical levels and a proportionate decline in administrative efficiency.

Simon also challenged the lattice organizational model. Simon believed that for any one of the lattice factors to be effective, purpose, process, clientele, and place, one of the others may need to be sacrificed. Major types of specialization cannot be achieved simultaneously. Also, an organization may be structured according to "purpose" but could for example be just as easily structured according to "process". Simon approaches administrative theory by looking at two areas 1) the description of the present situation so it can be analyzed and 2) weighing the various criteria and giving each it's proper place in the overall picture. By describing the administrative situation, Simon ignores the descriptions that are in functional and hierarchical terms. These can be superficial, over simplified and can lack realism. They often compete with each other. For the first time, administrative theory takes into account individual values and abilities as they pertain to organizational goals. To give weight to the various criteria of scientific management principles which are often conflicting, Simon concludes that "empirical research and experimentation to determine the relative desirability of alternative administrative arrangements" is required.⁵ The change in organizational outcomes that results from modifying administrative arrangements can then be tested and examined.

The five authors described above represent classical approaches to organization and management. They have also had

their impact on hospital organizations as well. Taylorism and the scientific management approach for example, have had a negative impact on health care delivery. The 1950's was a time when hospital beds were in short supply. The attempt was made by government, through the Hill-Burton Act, to increase the number of hospital beds through grants for new construction. The increase in the number of new hospitals resulted in a shortage of qualified hospital administrators. To compensate, system managers were pulled in from industry. These individuals were trained, for the most part, in areas providing a product, not services. More importantly they brought with them classical approaches to management such as Taylorism, organizational hierarchy, spans of control and so forth. They did not take into account the human side of health care, it's caring component, nor it's reliance on the specialist as the person most often knowledgeable and qualified to make health care decisions. "... if someone were commissioned to devise the worst possible system for patient care, the team/functional approach [ie. scientific management] would surely be the result."6

In addition to the classical models of organization for hospitals, there exist several modern approaches. The first is a human relations model expressed by Elton Mayo, whose famous experiments at Western Electric demonstrated that the human relations aspect of organizations have a greater affect on productivity than the formal hierarchical structures of organization.⁷ Mayo professed a people centered management style and an improved democracy in the work place. He advocated newsletters, workshops, and sensitivity training. He emphasized

the caring component of health care and patient advocacy. What Mayo's approach lacked was a structured organizational reformulation which could allow better nursing care and better patient care. The introduction of new technologies and the increasing severity of illnesses of patients, required a proportionate increase in management efforts. The result is less democracy, less employee creativity and less participation.

George Homans emphasizes esteem as an important factor in maintaining employee job satisfaction and productivity.⁸ His "exchange" model says that as long as members do not exhaust their "esteem account", they would remain an accountable member of the work group. The implication is to structure work designs so that esteem can be earned. The higher the esteem held by an employee, the greater his leadership and productivity.

An open systems model of organizational structure recognizes the influences the external environment can have. These influences include the government, the economy, the advancements in science and technology. The open systems model recognizes the uncertainty these outside influences can have for hospitals and it recognizes the interactions between organizations, the exchange of information supplied by professionals, patients, funds and services for example.^{9,10} One result of these environmental factors has been the structuring of multihospital networks by both nonprofit and for-profit hospitals. The sharing of resources and elimination of duplicate services, strengthens organizations against external pressures and uncertainty.

Another modern approach to organizational structure in hospitals is presented in general terms by Herbert Simon and James

G. March.11,12 Their decision-theory models said that organizations are conceived primarily as a means of gathering and processing information. Organizations structured in the matrix or lattice design have decentralized decision making structures which decrease the need for certain kinds of communication. Each level is able to solve it's own kinds of problems. As an example, primary nursing encourages each nurse to be the problem solver for all his or her patients. The result is better care decisions based on better information and therefore improved health care overall.

Last, the sociotechnical approach of Sofer and Perrow, stresses the importance of the technology to the goals of the organization.^{13,14} Organizations need to be flexible and adaptable to the latest technology. Employees as well need to be trained to operate the equipment and be capable of adjusting to handle new problems. This is more common in a university hospital or teaching institution.

It is evident that there is not one single model capable of incorporating all the complexities experienced by hospital organizations. A single feature can set a hospital apart from all the rest, such as being a Catholic hospital, or one dedicated to the treatment of AIDS for example. Nor is there a model available which integrates the administrative aspects of hospitals with the clinical services components of health care. A design is not yet available which ties together the public, the professional staff, and the managerial staff into a harmonious relationship.¹⁵

ORGANIZATIONAL BEHAVIOR

The theory of organizational structure steadily evolved as each author improved upon previous paradigms. As a group they represent a scientific management approach to administrative functions. This however, does not take into account the individual worker within the organization, his interpersonal and group behavior patterns, what his needs are, what motivates him to work, and what types of power influences him. Theories on organizational behavior account for these problems and help us understand better, how organizational goals can be better met and how organizational change can occur more effectively. Organizational behavior studies the impact individuals, groups, and their formal and informal social arrangements have on the structure within organizations. It also studies four dependent variables affecting organizational effectiveness, ie. productivity, absenteeism, turnover and job satisfaction, or "PATS". Table one lists independent variables which affect PATS on three levels, individual, organizational, and structural.

TABLE ONE

Level	Independent Variable
Individual	Values, Attitudes, Personality, Motivation
Organizational	Communication, Roles, Norms, Status, Leadership, Groups, Power, Conflict
Structural	Technology, Environment, Hierarchy, Evaluation, Rewards, Organizational development

VALUES AND ATTITUDES

There are several independent variables which can affect the dependent variables related to productivity and the first to be

discussed is values and attitudes. Values are preconceived notions which people bring to organizations. These notions include what is good, what is bad, what is appropriate and what is not appropriate. Values can be classified into seven normative types, they are, reactive, tribalistic, egocentric, conforming, manipulative, sociocentric and existential. A reactive value is not applicable to organizations, rather it is on a physiological level such as reactions to pain. Tribalistic values are held by people with high levels of dependence, they look to authoritative and powerful figures and hold traditional values. Ego centred refers to a self-centered, rugged individual, who maintains a high degree of self reliance. Conforming values are held by those people who have low tolerances for ambiguity and they have difficulty with people who do not accept their own values. Manipulative values refer to people who use manipulation as a legitimate means for achieving their goals. Sociocentric people want to be liked, they are concerned with informal social relationships rather than getting ahead within an organization. Existential values are held by people with a tolerance for ambiguity. They are people who tolerate different values from others and are flexible within organizations.

Value types can describe in general, how organizations are run. In the 1950's to 1970's, tribalistic and conforming values ran organizations. Lower level employees looked up to supervision as important authoritative people upon whom they were dependent for direction, while the higher level managers did not tolerate nonconformity among the staff. The 1970's to present has seen a shift to sociocentric and existential values, where employees are

accepted for what they are and what they can contribute to the organization.

Attitudes are composed of values as well as beliefs and one's tendency to act. People derive these attitudes from their parental influences, from peer groups, from affiliations with organizations and from the media. There have been conflicting studies as to the affects attitudes can have on group performance in an organization. W.C. Schultz finds that if homogeneous attitudes are held by organizational groups, more desirous performance will result.¹⁶ However, other researchers such as Hoffman [1959],¹⁷ and Hoffman and Maier [1961]¹⁸. suggest the opposite, that in fact, heterogeneous groups are more successful in problem solving.

It is not enough to simply know how attitudes are derived within individuals nor what attitude mix is best for an organization. How people react to work situations based on their attitudes is also important to understanding organizational behavior. In this case, attitude type is not a factor. Usually, people seek an equilibrium with their work environment.

Festinger reports that equilibrium is the goal individuals seek to achieve regarding attitudes within the organization. This equilibrium is the balance people try to achieve between the goals of the organization and their own values and beliefs. Conflict develops when the organization's beliefs are different from the individual's. What people can do to bring about equilibrium is to alter their attitude and/or their behavior. For this to be achieved people will rationalize to reduce dissidence. When dissidence is overwhelming, and behavior and attitude changes

cannot be rationalized, the individual has no options and must change jobs. The issue must also have some importance to the person, the more importance, the greater the likelihood of dissent.

Values and attitudes are two dimensions to the study of organizational behavior, another is motivation. The area of motivational theory is concerned with how managers can best improve the productivity, attitude, turnover and job satisfaction (PAIS) of employees based on the individual needs of that employee. Motivational theory can be subdivided in process theory and content theory. Process theory asks how motivation occurs, content theory asks what motivates people.

The leading process theory of motivation is the expectancy theory. "It focuses on the network of ideas people have about their jobs and how these combine with the strength of their desires to motivate people."¹⁹ Individuals derive expectations as to what future event may or may not occur based on their current job performance. For example, one may believe that by working hard and improving one's job performance it will lead to rewards and raises. One's desire to achieve these expectations and thus receive the rewards is called valence. How one achieves them is called instrumentality. In addition, the rewards may not be perceived as a function of job performance by the employee, ie. the subject probability is low. This may be due to 1) that even if one puts out a great deal of effort, the reward still would not be achieved or 2) that no matter how little or how much effort is put forward the reward is assured, as is the case of contractual pay raises. The challenge for organizations and managers is to

consistently meet individuals' expectations equitably. Motivational expectancy theory will not work if there are no rewards to strive for. While expectancy theory focuses on how employees are motivated, content theory focuses on what motivates employees. Content theory emphasizes the "need" that underlies the character and strength of employee desires.

Maslow declared a hierarchy of needs based on their relative fulfillment.²⁰ These needs in order of importance are physiological, safety, love or acceptance, esteem, and self actualization. Table two is a brief description of these needs. The more basic needs are of paramount importance for the individual until it is satisfied. One then seeks to satisfy the next higher need. When the lower needs become satisfied, the individual is motivated more by the higher hierarchical needs.

TABLE TWO

NEED	DESCRIPTION
Physical	food, shelter, sexual, organ orientation
Safety	security, protection against danger
Love/Belongingness	acceptance, informal group interactions
Esteem	need to be acknowledged, recognition of accomplishments
Self actualization	the desire to be all what one is capable of being, the real self, the ideal self

In the work setting, managers try to influence behavior by motivating employees. As the employees' need for a job, security, social acceptance, etc, are met, he is less likely to be motivated for those reasons. The consequence for the manager is that he must consider what employee needs are not yet satisfied and address his motivational techniques in that area.

Another approach to content needs theory is taken by

Herzberg's motivational-hygiene theory.^{21,22} His research asked employees to reveal circumstances which made them feel "good" and those which made them feel "bad". Once the good or bad feelings were identified, they could be enhanced or eliminated respectively. Herzberg found that good feelings were related to activities that the individual participated in, usually on his free time. These gave him a sense of responsibility, achievement, and recognition. Herzberg called these factors motivators and satisfiers. The bad feelings were related to circumstances in the work place environment. They included company policy, relationships with management, working conditions, salary and others. These factors are defined as hygiene or dissatisfiers. Most often they are factors which managers can least likely affect. Satisfiers and dissatisfiers however are two separate motivating dimensions. Preventing dissatisfiers for example, does not automatically enhance motivation. There must be motivating satisfiers present. The organization must prevent the dissatisfiers and maintain the hygiene factors by satisfying lower level needs such as belongingness, social needs, security, etc., through good personnel practices and management leadership. Motivation can be enhanced to satisfy needs for esteem and self-actualization by designing job tasks which provide responsibility, recognition, and growth.

A third approach to motivational theory is the need for achievement (n-Ach), the need for affiliation (n-Aff), and the need for power (n-Pow) as presented by David McClelland. He asserts that each individual can be measured according to their need for achievement, affiliation, and power. Those people with a

high achievement motive prefer situations they can take responsibility for. They take moderate achievable goals and calculated risks, avoiding very difficult or very easy tasks. They like to solve problems rationally and to look at situations analytically. When a job lacks challenges, individuals develop feelings of dissatisfaction. Job satisfaction may improve if managers direct their efforts to this individual's need for achievement by offering greater challenges.

Employees with a high need for affiliation desire social relationships. They are liked ,or try to be liked by the workers. The problem with this type of employee is his inability to be objective, as irrational and subjective factors have greater influence with him.

The person with a high power motive has a strong desire for control and influence, a need to win arguments. This individual desires positions of influence and likes to be identified with people of power. Although personal power is not needed, the power that comes from important positions is used to obtain and institute policies of his own philosophy. Successful managers seem to have low needs of affiliation and high needs for power. The power motive is associated with effective leadership and effective managers.

BEHAVIORISM

While motivational theories rely on subjectivity and emotions as a means of explaining behavior, behaviorist theories assume that behavior is explained objectively by individuals. That is, people consider the consequences of such behavior before he or she acts. Skinner calls this process operant conditioning and terms

the consequences which reinforce the behavior as reinforcers.^{23,24} Reinforcers can be positive or negative in nature. An example of a positive reinforcer is the reward of food for an animal that pushes the correct button, or perhaps the cessation of a negative stimulus when the animal performs the correct action. A negative reinforcement is the initiation of electrical shock when an animal performs a certain task. Similarly, reinforcers can be applied through acts of omission or acts of punishment. In omission the animal fails to receive a positive or negative reinforcer when it performs the action. In punishment, the animal is penalized for performing an action. In both instances the activity will soon disappear.

Although employees are not laboratory animals, the basic concepts of reinforcers can be applied in the work setting. Organizations can apply these basic principles when they are trying to affect "PAIS." Legitimate praise is one example of a positive reinforcer. Singling out an employee for excellent attendance is another. A word of caution however, the manager may believe he is praising an employee, and thereby providing positive reinforcement but it may not be a correct assumption.

"It matters not at all whether the manager thinks the praise is reinforcing. The employee might be indifferent to praise from this manager or praise about this work. Praise from the boss may occur so long after the good work that no connection is established between the two... Or consider that praise from the boss might be followed by rejection from colleagues for making them look comparatively bad..."²⁵

There are however two variations of the basic behaviorism techniques which are used successfully; affirmative and aversion control strategies. Aversion strategies include punishment and

negative reinforcement techniques. Punishment is by far the most common method employed. The employee for example, who is repeatedly tardy and subsequently receives a three day suspension. Or the employee who receives a less than desirable performance evaluation. Negative reinforcement can be seen when an employer gives out an unsatisfactory evaluation and the subordinate's performance then improves. Salesmen who work on strict commission are also good examples of negative reinforcement. Until they meet their initial quota, they must live with the anxiety and possibility of not having a paycheck that month.

Luthans and Kreitner point out that aversion strategies may have disadvantages.²⁶ Four disadvantages are summarized in table three.

TABLE THREE

1. Suppression of behavior which is only temporary
2. Improper emotional behavior can result
3. Inability to ever change the employee's behavior
4. Development of fear for the punishing agent (eg. the supervisor)

These disadvantages can be seen in a punishment example, of a dress code infraction. The solution for the employee may be to simply dress informally when the punishing agent, the boss, is not around. As the employee continues to be successful in avoiding punishment for his dress code infraction, he develops resentment and anger towards the punishment he received earlier. This can result in a lack of effort and cooperation. Overall the employee fears the boss and avoids contact with him or her.

The affirmative control methods of positive reinforcement and omission, avoid inflicting hurtful situations upon the employee. Affirmative control methods are popular techniques because they

avoid the side effects possible with aversion techniques. Emery Air Freight used positive reinforcement in its sales, customer service and containerized shipments departments. In sales, the organization provided supervisors with instruction to show them how to provide recognition, rewards and feedback as the reinforcers. Sales increased 27.8%. In the customer service department, the goal was to answer customer inquiries within 90 minutes of the initial query and to answer phone calls within three rings. Hourly feedback was received by employees as to how well they were meeting these goals as well as praise directed towards specific cases. Answering call within three rings improved from 30% to 90% very quickly and was a rate maintained for three years. Responding to customer inquiries within 90 minutes improved 60% the first day. In the last area, containerization, the use of containers rose 95% and saved the company \$650,000 in one year alone.²⁷

GROUP DYNAMICS AND DECISIONS

To this point, organizational behavior has been examined on an individual level. Understanding personal values and attitudes, expectancy and motivational theories, as well as behaviorism, can all contribute to the improved productivity of organizations. It is now appropriate to turn to group level performance and group decision making processes.

Group performance is an important aspect of organizational behavior if for no other reason than to appreciate its prevalence within organizations. Nearly every institution makes use of committees and groups to solve problems and make decisions. Groups are costly in terms of labor hours consumed but have the

benefit of broader based input and varying backgrounds. Individuals will also be more likely to accept direction from a committee and implement their programs.

Group decision making is slower, yet more accurate than individual decision making processes. Because of the social interactions present, groups provide an error correcting mechanism. The knowledge and perspective of each group member is combined offering a broader based result. Groups can also foster a type of competition for respect among the participants providing more alternatives to a problem.

Creativity can be a problem on the group level because individuals risk being censored or feeling foolish. To capture the creativity individuals tend to suppress in groups, one alternative is the use of questionnaires. People can then feel uninhibited and express their ideas freely, without fear.

The decisions groups arrive at are supported and better accepted than those made by an individual. Studies have shown that people are also more willing to implement changes when they were involved in the decision making process.^{28,29} The implications for organizations is that if the acceptance of a decision is critical, the group process is the best approach.

Group decision making processes have pitfalls of course, which if recognized, can be avoided. Social pressure within the group may force members to conform to a less effective decision. Early acceptance of a decision, called closure, can preclude the possibility of a better decision. Also, a member may be of a dominate nature and impose a less than ideal solution on a group while a less persuasive person may have better idea which is not

accepted. Similarly, a member with an ego problem may try to prevail in his point of view, instead of seeking out the best possible solution.

Janis describes groupthink as another particularly difficult group decision making problem. Groupthink is defined as a "deterioration of mental efficiency, reality testing and moral judgement that results from group pressure."³⁰ There are at least three predisposing factors to groupthink 1) the group is cohesive and close knit, 2) the group becomes insulated from qualified outsiders and 3) the group leader dominates the group and promotes his favored position. Groupthink displays some characteristic symptoms once it has set in. The group develops illusions of invulnerability leading to excessive optimism and extreme risk taking. There is a collective rationalization which discounts warnings which would otherwise cause a reconsideration. There is an inherent morality causing the group to ignore the ethical and moral consequences of their decisions. The group stereotypes enemy leaders as "too evil to warrant negotiations."³¹ Direct pressure is put on members of the group who oppose the main body and their loyalty may be questioned. Some members emerge as protectors of the group from adverse information which might threaten the group and challenge their morality.

To avoid groupthink, organizations must be on guard for such an occurrence. Simple awareness is the best protection. Also, organizations should allow the free flow of ideas and the expression of varied opinions. Managers can refrain from pushing their ideas on the group, and they can invite outside expert opinions. Leaders can support and protect dissenting voices and

even assign a devil's advocate to challenge all proposals. Because people are more creative when working alone, committee members should be encouraged to work on problems outside the group setting, then report back with their ideas. Reducing group member interactions reduces the adverse effects mentioned above.

The Delphi technique is a popular method of reducing group interactions and improving group decision making. Members of the group can be anonymous or, a confidential list can be maintained. What is important is that the communication process, which is in written form, remain anonymous. Each member's position is reduced to writing and is then communicated to each group member. Each member digests the information and integrated it with his own position. He then reformulates that position, or continues to maintain it, stating exactly why. This procedure can be repeated as needed. Dalkey reports that the Delphi technique leads to better decisions by the group than in face to face situations.³²

Another technique which can also be used to combat the side effects of group behavior is the nominal group technique. Unlike the Delphi method, the nominal group technique allows group members to meet face to face, and communicate freely. There are however, restrictions and guidelines to be followed. The size of the group is limited to 7 to 10 people, sitting at a table in view of each other. The problem is read as well as the nominal group instructions. The members then write down their ideas on paper. After 5 to 10 minutes a secretary obtains one idea from each and writes it down on a flip chart. There is no discussion. This is repeated until all the ideas are written on the chart. Each idea is now discussed and clarified by the participants. Members then

secretly ranks each idea and the one with the highest average ranking is chosen.

The nominal group method has the advantage of nullifying the pressure, stronger willed and assertive, members can exert. The disadvantage is that status and rank are not completely eliminated. Some members may still be influenced by the source of the idea rather than the quality. Evidence shows however, that nominal groups are still superior to interactive ones.³³

COMMUNICATION

For any organization to affect change, subordinates must be motivated and influenced. For this to occur managers need to communicate. Communicating is what managers spend most of their time doing. For this reason, it is important to understand what factors make up communication, the barriers to communication, and how communication can be improved by eliminating these barriers.

Communication is the transference of the understanding of meaning. There are generally six steps which occur during communication and table four lists these.

TABLE FOUR

1. Thinking-origination of the thought to be sent
2. Encoding-putting the thought in a form of expression such as language, body movement, art, music
3. Transmission-oral or written
4. Perception-the receiver of the message must be able to perceive the transmission
5. Decoding-the receiver translates the transmission such as language, into something understood by him
6. Understanding-the message is understood as it was intended by the sender

At each step there is the potential to either block the communication or for the communication to result in distortion.

Generally, there are six potential barriers to communication. Distorted perceptions is the first barrier. It can be the result of many factors. The first involves the fact that most people fail to absorb and utilize information which reaches them, peoples' thoughts can wander off thinking of other things. People may hear what they want to hear, ie. selective inattention, which results in the receiver perceiving something different than what was intended by the sender. A receiver must also be interested in the communication, his perception may be distorted because he has other important needs or he lacks motivation to concentrate on the sender.

The second barrier to understanding a communication is a distrust of the source. When a person is not trusted, the messages he may wish to communicate will not be perceived appropriately. Similarly, if a sender is thought to be biased, his communications will be tainted with skepticism. Stereotyping individuals also distorts communications with that individual.

Because people evaluate communications by also evaluating the source, attitudes about the source may be communicated back to the sender. If the sender is a subordinate, the superior often becomes anxious and tries to protect his position, not willing to accept communications about the negative effects of his behavior. In so doing, the communication process between subordinate and superior stops.

When the receiver of a message anticipates a threat of some kind from the sender, he may exhibit defensive behavior. These behaviors are more likely to occur with people of very high or very low esteem. It prevents a listener from concentrating on the

intended message. For this reason it is particularly appropriate for superiors to be able to listen to individuals without evaluating them as threats, as stereotypes, with mistrust, or with premature criticism.

The fourth barrier is erroneous translation. People communicate in words and deeds based on their backgrounds of experience and knowledge. These of course are not the same for everyone and the same words can have different meanings rendering messages ambiguous. Senders may believe they have encoded a message properly but the receiver's understanding may be different than intended.

Another type of defensive behavior is caused by past distortions. This is the transference of a past experience, possibly an anxiety producing experience, to a present situation which is totally inappropriate. This repetition is a compulsive effort to master the original experience.

When one communicates unintended messages as well as the intended ones, this is called lack of congruence. Lack of congruence distorts communications, confuses and misinforms the receiver. Often, people are not aware of the unintended messages they may be sending. To be congruent in communications, individuals must be congruent on three levels of reality; experience, awareness, and intention.³⁴ Experience reality is what people really think, such as love, hate, fear, happiness. Awareness reality is what people think they are, what they admit to their consciousness. Intention reality is the most superficial level and it is what we intend to communicate in word and deed. The most effective communication between two people occurs when

they are congruent, ie. on the same levels of reality. When gaps occur between the levels of reality, the result can be deceit, defensiveness, and concealment, all inhibiting effective communication.

Transactional analysis offers another view to congruent communication. IA suggests that there are three levels or states, in all people, the child, the parent, and the adult. The child has feelings internalized as infants and they include creativity, curiosity, the desire to explore and touch. The parent state projects the unquestioned or imposed external events perceived by people when young from parental actions. People project the do's and dont's, the laws, the absolute truths according to the values of their background and parental upbringing. The adult state occurs when we have the ability to find out for ourselves how life is different from the concepts taught to us.

Transactional analysis tries to develop and strengthen the adult level, tries to free the adult from the stresses caused by the conflicting child and parent state. Strengthening the adult level allows people the freedom to question, to choose, to change and to respond. Most importantly, it facilitates effective communication by sticking to the current facts and feelings in a reasoned and controlled manner.^{35,36}

As communication occurs within organizations, there are four systematic ways messages become distorted, especially if communicated by word of mouth.³⁷ The first way is called condensation, where the message becomes shorter, simpler, some items emphasized, others ignored. Second is called closure, where the sender of an ambiguous message fills in the gaps with his own

version of the original message. Third is expectation. Here, people hear what they expect to hear, then as they in turn pass on the message, they become the sender of a distorted message. Fourth is association. A person becomes guilty by association when he is the bearer of bad news.

Besides the four basic ways of distorting messages as they are passed on, a message can be intentionally manipulated by an individual. They may do this to satisfy a goal or need or to improve their particular situation. People also tend to communicate with those who can help them achieve their aims and tend not to communicate with those who cannot. People also communicate with others who make them feel secure and gratify their needs. Superiors tend to delete references about their mistakes to subordinates and subordinates tend not to ask superiors for help, lest they both become viewed as inadequate.

The subordinate to superior communication is particularly controlled. Actual disagreements with a superior tend to be minimized but individuals who do this to excess are labeled "yes men." The most ambitious employees are also the most inaccurate communicators.

The discussion on communication has important implications for organizations and managers. Managers need to influence employees to affect change and improve "PAIS". Communication is the means to this end. Congruence probably leads to better communications but it exposes the manager and his true feelings. The defensive behavior resulting from a lack of congruence is a hard barrier to overcome. Some deceit may be essential on the manager's part if the employee is to be influenced and motivated.

Yet, the more a sender departs from congruence, the more difficult it will be to communicate understanding. The manager should therefore communicate fully and openly on task orientated concepts and communicate fully and openly about feelings in a non-emotional, adult way. Effective communication in these two areas is associated with high performance organizations. Spontaneous and emotional outburst of feelings are not associated with high performance organizations and should be avoided.³⁸

POWER AND INFLUENCE

Another important factor to be considered when studying organizational behavior is the area of power and influence. Power has been defined as the ability to control anything of value. It has also been defined as the probability of one being able to get another to do one's will even though they do not want to. And finally, a personal or positional attribute which is the base of one's influence. French and Raven researched the concept of power within organizations and have defined five types, listed in table five.³⁹

TABLE FIVE

1. Coercive-based on fear, force and threats
2. Reward- based on having the ability to offer rewards
3. Expert- based on knowledge, influential with professionals
4. Legitimate- based on positions held, offices elected
5. Referent- based on charismatic personality, desirable traits

Two aspects of the power concept are important in these definitions, the first is the influencer's power and the second, the expectations of the follower. The follower always has the choice of whether or not to follow. Knowing the follower's need

hierarchy allows the leader/manager to choose the appropriate influence process which best affects the subordinate.

Coercive and Reward Power

Both coercive and reward power can influence subordinates through the fear or hope mechanism, if they are applied consistently. It is important that the follower perceive that effort will lead to the rewards and that the rewards be valued and satisfy his hierarchy of needs in some way.

Subordinates will not be influenced by managers if they believe the goal set for them is unobtainable, if there is not enough time to complete the assignment or if they are simply incapable of performing the task. The manager will also be ineffective if the subordinate believes the threats are not real, if the manager lacks credibility, or if he is not believed. He will also be ineffective if the follower does not value the goal or does not fear the threatened punishment.

A manager who has coercive or reward powers can effectively influence subordinates when the subordinates believe 1) they are capable of achieving the goal or reward, 2) what the manager promises, 3) the goals are something they desire or want and have value to the subordinate.

Leaders with coercive or reward power must therefore design a system so that goal achievement leads to the follower's personal goal (or punishment). To do so they must formulate goals, communicate them and ensure understanding of the path to goal relationship.

Legitimate Power

Legitimate power is rooted in tradition where peoples' response to it is nearly automatic. Individuals react to a department head because he is the department head. New military recruits respond to their drill sergeants, initially out of fear, but after a few weeks, blindly, without questioning. Subordinate response is to the leader's position.

Referent Power

Referent power is influence reflected by an indiscriminate fidelity to an individual possessing charisma or inspirational qualities. It is a power bestowed by an admiring person who wishes they could be like that too. Individuals often respond out of an emotional attachment or even love for the leader. Charismatic leaders influence because of their charismatic attributes not because of their position. They would not do well in highly structured settings, for one reason because they tend to bypass the structured chain of command and go directly to the subordinate. This also tends to create loyalty and commitment by the subordinate to the superior.

Appearing to have power can create referent power. Personal dress, office location, and status symbols can give an illusion of power. However, this can be limited by actual performance or failure, or strengthened by success.

Expert Power

Expert power is the most common type seen in organizations today. It is a response due to the belief that this person knows his field and has proven it in the past, either through deeds, diplomas, certificates, etc.

Expert power is risky however, for managers to unquestioningly and uncritically accept as input from his subordinate, experts and specialists. Too much subordinate influence over a person with legitimate power may effectively diminish the manager's authority. An example is the expense and pain which can result from unnecessary surgeries. Patients seem overwhelmed in the face of the physician's apparent expert power and may accept any recommendations he makes.

Representative Power

Representative power is derived from a group's willingness to delegate authority to leaders who represent them. These representative leaders do so to a third party, upper management for example. The representative leader must be careful not to confront upper management on every issue however, because they cannot win every issue. This would only result in a loss of credibility by the representative in the eyes of his constituency.

LEADERSHIP

The final area of study regarding organizational behavior is leadership. Leadership is important because it manifests itself in the ability to influence individuals and groups to the achievement of organizational goals (ie. "PATS"). There have been three approaches to the study of leadership, the trait approach, the behavior approach, and the situational approach.

The trait approach asks the question, are there definite traits or characteristics that good leaders possess which can be emulated by others? Stogdill undertook a massive review, researching this question.⁴⁰ He concluded that there were indeed certain personality characteristics successful leaders possess.

They are listed in table six.

TABLE SIX

Characteristics of leader

Fluency of speech	Achievement Drive
Dominance	Drive for responsibility
Knowledge	Task orientation
Emotional balance, control	Self confidence
Originality, creativity	
Participation in social exchange	
Sociability, interpersonal skills	

The trait approach however is not as popular as it once was because it has not proven useful in predicting leaders in people with these traits. For example, one can have these characteristics but because of environmental factors, not be a "leader" or conversely, the situation at the time may manifest a leader who does not possess these traits. The traits can also be contradictory and do not take into account which traits are appropriate for a given situation.

The second approach to understanding leadership is the behavior theory approach, which asks, can people who behave in certain ways be identified, then trained to be leaders? Are there innate personality factors which can be developed. If so, training could be provided to teach and enhance these skills. The Ohio State Studies of the 1940's took this approach and concluded there were two leadership behavior characteristics, 1) initiating structure and 2) considerate behavior.

Initiating structure characteristics are possessed by those leaders who can define and structure organizational goal relationships. They then communicate to subordinates what these goals are and their roles in it. These leaders get the work out by excelling in planning work, directing work and controlling

work. They set clear cut tasks and standards, perform evaluations and set deadlines. The result is less confusion on the part of the subordinates. They understand their role and if they fail to perform, understand it is their own fault.

Leaders who possess considerate behavior have a management style based on mutual trust and respect for subordinates and for their ideas. Their actions take into account the human needs of their subordinates and the considerate leader attempts to support those needs by adjusting schedules, expressing honest concern, empathy and understanding. They foster open communication.

Good leaders have both of these qualities, initiating structure and considerate behavior. The result is high job satisfaction and high productivity on the part of subordinates. One approach is not superior to the other. Successful leaders must view the total situation and apply the style which is most effective to the situation.

There are three situational models for leadership, 1) the contingency models, 2) the path-goal models and 3) the decision making models.⁴¹ Fiedler introduces his contingency model by making this assumption, that satisfied and contented subordinates will be more productive than unsatisfied and discontented subordinates. The effectiveness of the group is contingent upon a proper match in leadership style and circumstances. It is an interaction with the employee which is appropriate for the situation. Similar to the Ohio State studies, Fiedler found two basic leadership styles, 1) task motivated and 2) relationship motivated. Task motivated leaders are goal orientated and satisfaction comes from the completion of the task. Secondary for

this person is subordinate feelings, but they are not usually eliminated. Relationship motivated individuals tend to share leadership responsibilities and encourage employee involvement. They have good interpersonal relationships, they solicit support from others and seek esteem, admiration and a relaxed and secure situation.

The basic leadership style, whether task or relationship motivated, is hard to change in a leader. This implies that it may be easier to change their leadership situation to improve productivity.⁴² There are three methods of doing so. The first is to change the situation to meet the leader and his style. The difficulty is that leader-member relationships are most important to a situation rather than a leadership style. It is hard to predict whether a leader will be liked, therefore the selection of leaders is not advocated, but the model can aid in selecting people for certain positions. The second approach is to try and vary the situation to meet the individual's leadership style. Organizations can do this by varying the amount of formal authority delegated to a given leadership position. The amount of structure can also vary so that a situation can match the leader's style. Lastly, there is leadership training which tries to analyze the position facing the manager and then tries to teach him how to adjust to it.

The second leadership model is the path-goal model. Path-goal theory combines expectancy theory with behaviorism by assuming humans are reasonable and therefore can be motivated to perform a certain way because of the expected payoffs. These rewards can be basic, such as security, social, or physiological.

Or, they can be instrumental such as money or transfers. Path-goal theory says that leaders should set instrumental payoffs as incentives and help employees attain these goals and the goals of the organization. The manager should also clarify the path to the goal in clear terms and should provide opportunity for satisfactions enroute to the goal. The route will not be traveled if intermediate rewards are absent. Managers can lead effectively by clarifying the path when tasks are ambiguous. When managers try to take initiative when a task is not ambiguous and clarification is not needed, their efforts are viewed as insulting. In these situations, the jobs are structured and routine and the manager can be most effective when he has high levels of consideration for subordinates. Evans⁴³ and House⁴⁴ advocate the above approach, although House further divides the initiative approach and considerate approach of Evans into four types 1) the directive leader, who gives guidance and maintains standards, 2) the supportive leader who shows concern for his employees, 3) the participative leader who solicits with subordinates and 4) the achievement orientated leader who sets challenging goals, who expects high performance and continuous performance improvement.

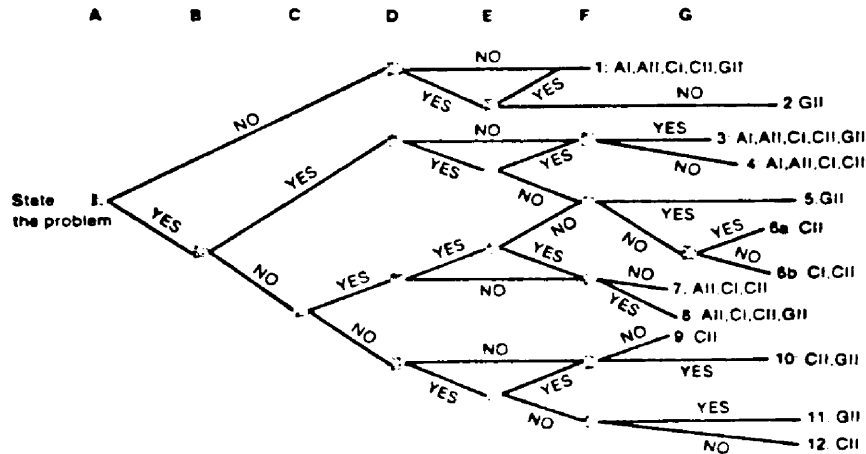
While all of the models and theories above are straight forward, simple cause and effect relationships can not be precisely derived in the social sciences. For this reason contingency factors have been developed to account for deficiencies in the leadership models. The first factor accounts for the personality of the subordinate and his need for independence.⁴⁵ If a subordinate has a high need for

independence, participation, leadership may make the employee feel satisfied while a subordinate with low needs of independence has the opposite effect. Another contingency is the belief held by the employee as to the value of path-goal efforts. Some do believe hard work yields rewards, while others maintain that rewards are due to luck, knowing the right people or being at the right place at the right time.⁴⁶ A third contingency is ability. Path-goal models will not work on people who feel inadequate or incapable. Also when one feels especially qualified, a supervisor only creates resentment when he attempts direction and guidance.

A final situational approach to leadership is the Vroom and Yetton model which demonstrates the complexity of the leadership topic.⁴⁷ They start by asking what is leadership ultimately supposed to accomplish? The answer is 1) quality decisions regarding organizational productivity and performance and 2) acceptance by his subordinates. The aim of the Vroom and Yetton model is to get decisions made and then implemented rather than achieve productivity and satisfy feelings. How decisions get made is determined by what type of decision needs to be made. Knowing the type of decision allows the supervisor to choose the degree of employee participation in the decision making process. Figure one on page 36a, summarizes the Vroom and Yetton model of leadership. The top of the figure shows situational variables that ought to influence the leader's decision making process, specifically, the amount of participation the leader allows subordinates to have. The flow chart is followed and the appropriate code is obtained, and translated from the Types of Leadership Styles portion of the figure.

Figure 2 DECISION PROCESS FLOWCHART (FEASIBLE SET)

- A. Does the problem possess a quality requirement?
- B. Do I have sufficient information to make a high-quality decision?
- C. Is the problem structured?
- D. Is acceptance of the decision by subordinates important for effective implementation?
- E. If I were to make the decision by myself, am I reasonably certain that it would be accepted by my subordinates?
- F. Do subordinates share the organizational goals to be attained in solving this problem?
- G. Is conflict among subordinates likely in preferred solutions?



Types of leadership styles. These authors pose five types of leadership styles available to the manager:

Autocratic Processes

- AI "the manager solves the problem by himself using whatever information is available to him at the time"
- AII "the manager obtains any necessary information of a specific nature from subordinates before making the decision himself"

Consultative Processes

- CI "the manager shares the problem with relevant subordinates individually, getting their ideas and suggestions before making the decision"
- CII similar to above "but the consultation takes place within the context of a group meeting"

Group Processes

- GI "corresponds with Norman Maier's concept of group decision in which the manager's role is that of chairperson of a group meeting aimed at reaching consensus on the action to be taken"

ORGANIZATIONAL STRUCTURE

Having examined values and attitudes, motivation and behaviorism, group dynamics, communication, and power, all components of organizational behavior, this paper now begins the second area of organizational theory, organizational structure. Structure is concerned with organization design, the design of work, approaches to team work, organizational objectives, performance and evaluation, systems, and technological innovations.

WORK DESIGN

Work design focuses on the structuring of jobs, work groups, and teams. This is important to organizations today due to advances in technology and automation. The price organizations and individuals pay for technology is less job satisfaction.⁴⁸ Organizations used to see workers, frustrated by boredom, disinterested with a job of seemingly, no real importance. They would conclude that people just did not want to work anymore. The answer used to be increases in pay, more job studies or more regulations. The workers often reacted adversely and with conflict, an increase in absenteeism, or an increase in job turnover. More recently three alternatives have been identified to improve job design thereby improving job satisfaction. They are job enlargement, job enrichment, and motivational effects.

The first approach, job enlargement, increases the number of tasks to be performed. Herzberg calls this horizontal job loading.⁴⁹ An example of this concept can be seen in the SAAB automobile company of Sweden. SAAB redesigned the task of

assembly line workers from the traditional methods of repetitiveness, to a procedure or program type system. This system allows employees to work as a group or team, each team assembling an entire engine or automobile. This approach can be applied to other jobs where there are several repetitive tasks to be performed.

There are four benefits resulting from job enlargement, the lack of boredom, the work becomes more meaningful, the individual has improved feelings of confidence, and improved feeling of responsibility.

The second approach to work design is job enrichment. Job enrichment is similar to job enlargement in that both expand the measure of work tasks. Job enrichment goes a step further by including some planning and control tasks, once held by supervisory people. Herzberg describes this approach as vertical job loading. Subordinates are now responsible for job quality as well as quantity. The benefits and motivational effects of job enrichment are the same as for job enlargement. What is important here is the added autonomy and self-control the employee now has.

The third approach to work design is the autonomous work group design. It not only has the advantages of job enlargement and job enrichment, it also allows the employee to create larger, and more technologically feasible chunks of the total product. Secondly, autonomous work group design provides for social satisfaction derived from interactions with other people. Thus the autonomous work group design has also been described as a sociotechnical system. After management has set a minimum production output for the day, autonomous work groups can design

the tasks to best meet their needs. They can for example choose to build one complete engine or instead choose to build a third of a car, then change responsibilities with another work group who completed a different third of the car. The group concept has all the benefits of individual job enrichment and enlargement with the added benefit of social interactions with fellow workers.

There are limitations to these approaches to work design which should be mentioned. The first concerns the individual worker who has his own set of values, beliefs and attitudes. Placing people in job enrichment designs, who do not hold a strong work ethic, may not produce benefits, they may even cause negative effects. Other people may actually prefer the old repetitive work methods, something they may have been good at and where interpersonal relationships were already established. How people react to changes in work design depends on their need for independence, their background, their belief in the work ethic, the level of education, and their need for self control and self reliance in the working environment.

A fourth approach is that of Hackman and Oldham, the effective work team design.⁵⁰ There are three criteria which make this approach effective. First, group output must meet the expectations of clients or supervisors. In this respect it avoids employee satisfaction as the only criteria. Second, individuals in the group must want to be in the group, which satisfies their need for socialization. And third, members must be capable of working together. Hackman and Oldham's approach also recognizes that 1) the level of effort exerted by workers is a factor, 2) the knowledge and skill of the worker is important and 3) the

procedures used by the workers when performing their job is important. These three variables will also determine if a group is effective or not.

ORGANIZATIONAL DESIGN

The arguments which stress the importance of organizational work design, the individual jobs themselves and the total network of jobs tied together, have a higher probability of producing positive work motivation if it were designed to fit the kind of goal being pursued by the organization. Therefore, if the right structure is designed, people are more likely to work together towards the proper goal.

Today's professionals are highly skilled and trained employees. They expect to fulfill a multitude of their needs on the job. Since such employees tend to take high wages and fringe benefits for granted, it should be apparent that the key to long-term motivation for them rests in the satisfaction of the higher level needs, i.e., their esteem and self-fulfillment needs. It is management's duty to develop an organizational climate that will produce effective motivation and satisfaction of these needs, which will thereby resolve the conflict between individual and organizational goals.

Organizational design concerns itself with two factors that determine how people behave in complex organizations. The first is job responsibilities as a function of organizational goals and the second is the coordinating and decision making structure which exists.

The first method of understanding how people behave in complex organizations, the job itself, should be considered as an

entire network of jobs, taken together. This can be thought of as the technology to achieving the organization's goals, the design of the technology which determines employee behavior.

Technology requires three elements, 1) an organizational objective or goal, 2) the proper capital equipment and 3) the trained personnel to perform the required tasks. Together, they are the interdependent technology of the organization. To achieve the goals more efficiently specialization takes place as well as a pattern of interrelationships or procedures. All of these factors are required before organizations can achieve their goals successfully and efficiently. "Technology becomes a requirement of achievement for both people working in organizations and for people who depend on them."⁵¹

Research into technology requirements have lead to the conclusion that the technology required to achieve different kinds of organizational goals depends on 1) the relative stability of the goal and 2) the relative homogeneity of the goal. A box or container factory would be relatively stable and homogeneous, while a computer company would be volatile and heterogeneous in nature. The stability and diversity of organizational goals is directly related to the type of employee required, how diverse he must be, how difficult coordinating the job technology will be for him, what kinds of coordinating systems to use and what attitudes he will have especially toward the decision makers.

How diverse an employee must be depends on the stability and complexity of the organization. Even within the same organization, relative stability/complexity can vary by department. Lawrence and Lorsch stated three main specializing functions common to

either type of organization. They are 1) a product-development department manned by scientist and engineers, 2) a manufacturing department manned by plant production personnel and 3) a sales department manned by marketing personnel.⁵² Each department is staffed by people with different goals and objectives. They differ in their approach to task-orientation vs people-orientation. They differ in time orientation as well. Successful companies have pronounced differences in their department's attitudes.

These differences are not without their price. Specialization causes communication breakdowns within organizations, leading to stress and conflict. Specialists within various departments differ in attitude and background. Coordination of job tasks is relatively easier in stable and uncomplicated organizations. This type of organization has evolved a formally structured coordination system as the best means of achieving it's organizational goals. Job descriptions are rationally detailed, policies and procedures are developed and implemented to coordinate the diversity of jobs and managerial positions are created to carry them out.

The organization's design of technology affects the behavior and motivation of subordinates. When the technology system fits the good of the organization, there is a greater chance for the employee to achieve his needs and goals. Also, human needs are better achieved in an organization if other people and departments do their job correctly, through proper coordination. Behavior is improved by the well designed technology of a stable organization because authority over them is exercised more by the process, than

by the superior.

A dynamic organization requires different coordinating systems to achieve effective organizational goals. First they are better operated by ad hoc committees and with flexible communication. There should exist a wide variety of task forces, committees and informal groups. Also in dynamic organizations there should be a wide variety of people engaged in problem solving. There is less emphasis on organizational hierarchy and structure and more reliance on knowledge and skills.

A dynamic organization with these types of systems in place can have positive effects on subordinate behavior and motivation. This is due in large part from the frankness and openness apparent in problem solving discussion. The subordinate attains a sense of achievement, involvement and competence leading to improved motivation. Dynamic system structures described above fulfill human social needs which fit the needs theories of Maslow, McClelland and Herzburg above. Overall, dynamic coordination systems offer greater opportunity for human interaction and thus for satisfaction of social needs on the job.

MINIMIZING RESISTANCE TO CHANGE

Managing human resources in the face of constant technological innovation, requires the ability to implement these changes. While managers may welcome this challenge they are sometimes uncomfortable with the consequences for themselves personally.⁵³ However, failure to implement change smoothly and efficiently will probably result in employee resistance seen as less productivity, more job dissatisfaction, increases in job

turnover, and transfer requests, hostility, strikes and more.⁵⁴

Unfortunately, managers often fail to recognize the importance of employee acceptance in bringing about a change. No longer should managers be required to "force" a change upon employees. They need to recognize the human forces underlying resistance and better understand the processes involved in developing resistance to change.^{55,56} It follows then, that once managers recognize the key elements of resistance they can choose appropriate techniques applicable to particular situations.

RECOGNIZING RESISTANCE FACTORS

The fact that a change may be good for a department is not a good reason for individuals to change. They often ask consciously or unconsciously "what do I have to gain from it?" or, "how is this going to make my job easier?" People are also afraid of losing something as a result of change. That something could be social status or self respect but is usually, for managers, power.⁵⁷ For example, creating a new supervisor's position may reduce the other supervisors' work load but it may also reduce their status and power because responsibilities are shared.

Individuals also are creatures of habit. They become used to doing things a certain way and when they must learn a new way, feel this requires more energy and effort than they are willing to spend.

Resistance due to self may not be immediately obvious. Subtle politicking or lobbying against changes is done by the people who have the most to lose by its implementation. The result may catch managers by surprise.

Lack of trust is another reason for resistance and it

develops over time. It is due to past decisions which were perceived as unilateral and arbitrary. An attitude of us vs. them or administration vs. labor develops. Workers can be perceived as lazy, avoiding responsibility or generally resistant to all changes.⁵⁹

Lack of trust can lead to misunderstandings. Kotter mentions an example of a company president who wanted to introduce flex hours into the company.⁵⁷ The employees, not fully aware of what flex hours were, resisted through their union and the idea was abandoned. Misunderstandings, therefore, must be resolved quickly before they snowball and resistance becomes too strong.

DIFFERENT INFORMATION AND ASSESSMENTS

A common management weakness is lack of communication and information. Managers sometimes assume employees have access to, or have acquired, the same information they have. Because this is not often the case, different assessments are made upon the available information which can lead to resistance.

Illustrating this problem is the bank president who was so dismayed by a department's projected losses, that he drew up plans for its immediate reorganization. He kept his intentions secret until the time for implementation because of his concern for the bank's stock prices. He was met with massive resistance by the affected employees who felt this change would injure further, a new project the department was working on and the bank president was unaware of.⁵⁷

Lack of communication can also generate rumors, gossip and paranoia. Information is sometimes communicated to only a few and the rest end up resisting. Information can also be distorted as

it moves through the hierarchy. Information needs to be communicated to all affected employees including part-time and weekend people, and other affected departments.

If staffers have more and better information, resistance can also be constructive for an organization. Managers who assume resistance is always bad and therefore always to be fought, may be short changing the organizations. Complete and accurate knowledge to all affected personnel, therefore, can minimize resistance and benefit the organization.

Implementation of a change often does not consider the steps required to reach a desired goal. Verbal rehearsals can neglect the need for adequate planning and employee involvement. Sudden and arbitrary directives can make employees feel like "things" instead of respected colleagues; changing work hours with no forewarning for example. People like to be able to control their own destinies and will become frustrated and resist external controls from management. Poor planning by management can lead to low morale and lack of trust. There will develop a lack of confidence in management to affect change in the future.

Certain amounts of stress are, without question, necessary for good job performance. It can drive employees to greater performances and achievements. However, too frequent change can induce stress which results not only in resistance and unwanted behavior, but also in physiological changes harmful to individuals: backaches, migraines, and heart attacks are examples.⁶⁰ It should therefore be the function of managers to implement vital changes without producing needless stress and conflict which can generate resistance and inhibit performance.

Regardless of the resistance it creates or the stress it often produces, change is a necessary part of organizational life. Managers and supervisors are charged with the function of accomplishing and encouraging change, without needless stress. Most changes encounter problems to some degree. The change may take longer than expected, or it may damage employee morale. Change can also cost a lot in managerial time and emotional upheaval. Some managers may be so afraid of failure, a change is not even attempted. A manager's anticipation or fear of resistance by employees can actually lead to resistance itself.⁵⁸ Resistance to change can lead to turnover, transfer, quarrels, hostility, strikes, or work slow downs. Managers must anticipate these temporary declines in performance and progress but be able to minimize them else they become permanent. They must be able to understand the social structure of their organization and where resistance is going to come from. They must be able to respect and accept the various values of employees.

TECHNIQUES FOR IMPLEMENTING CHANGE

The most important part of implementing a change is to be aware of the reasons for change. Change is not a mechanical procedure or a paper shuffle, but it is a human change.

Careful planning and outlining of the steps needed for a change are necessary so that employees do not perceive these decisions as haphazard.^{53,60} One example is a flow chart system for analysis of each step. Enough time should be allowed for the step causing the greatest amount of difficulty to be worked out. Employees can and should, be called upon to provide information concerning the problem areas.

Timing a desired change can be considered a part of planning. Managers can sometimes take advantage of census percentages and employee staffing: ie. vacations and leaves of absence.^{57,61}

Pacing can be important when a change may be perceived as being forced or moving too quickly.⁵⁵ Employees are also evaluating the proposed change. While simple changes can be evaluated rather quickly beforehand, complex changes require time. Time should be allocated for employees to become familiar and comfortable. Pilot programs of a smaller scale allow evaluation to take place. Problems and concerns can be handled on a relatively smaller scale before full implementation. Lack of a pilot program may fail to surface unanticipated problems causing frustration, resistance, and failure.

Planning is most effective when employees themselves are allowed to participate.^{53,57} Lines of communication become open and people are more likely to support what they create.^{53,56,57,61} When people participate, they have influence, and they become motivated to see successful conclusions. Participation leads to greater opportunities to contribute, more complete understanding of all the facts, clearer understanding and definition of the objectives and a sense of responsibility. Influence makes work meaningful and contributes to a feeling of well being.

Effective employee involvement presupposes a genuine respect for each employee's potential contribution. If participation is being used as a manipulative technique, workers may soon sense it and resentment and resistance follow. Forcing change without any participation leads to resistance also, regardless of the change's merit. Because workers have changed a great deal in the past

several years, autocratic methods are no longer acceptable.

Open discussion solicits greater employee involvement. After a manager has thoroughly thought out a new policy to his satisfaction, an open meeting with affected personnel is beneficial. The first meeting should be open, it should present the proposed change and the reasons behind it. Information can be exchanged which can be further researched and discussed.

Managers set the tone for this first meeting. They decide what exactly is to be discussed. For example, is the change itself going to be discussed or the means to make the change. Are ideas going to be gathered for future meetings or is the decision going to be made now. This initial meeting seems to be most effective if it is used to gather ideas. It allows people to think about the change and express themselves after some reflection and research. Judgements should be held to a minimum or worker reaction may be withheld and lost. Ideas can be written out and each discussed using the Delphi or Nominal Group techniques.

Inaccurate and inadequate information frequently cause resistance. It should be the successful manager's responsibility to educate his employees before a change occurs. This helps them to see the logic of the change. It also helps to coax out resistance and give people time to get used to an idea change. One on one meetings, group presentations, seminars, memos, and reports are all methods of educating and communicating beforehand, a proposed change.

Closely associated with education is re-education and skills development which may be necessary to implement an innovation. Facilitation and support are especially useful when resistance is

due to fear and anxieties. Managers can allow workers to develop the new skills which may be necessary or allow them to take time off during particularly stressful and demanding periods. Simply listening and providing emotional support may be all that is necessary. Also, by being a role model, managers create an atmosphere of commitment and enthusiasm.

Often changes must be made quickly and with least possible expense. Manipulation can be used through very selective use of information and through a conscience structuring of events. Cooptation is one form of manipulation which can be applied to groups or individuals. Coopting an individual can be done by giving him a desirable part in the design or implementation of a proposed change. A group can be coopted by giving the group's head or influential member a key role. This should not be confused with participation however. The group or individual's input is not wanted or desired, only their endorsement.

Cooptation is fast and inexpensive compared to negotiation (eg. with unions) and participation. Serious drawbacks can develop however, if people feel they are being lied to, or not being treated equally and with respect. A greater resistance can be created in that situation than if nothing was done. Also, once integrated into the decision making group, a coopted individual may try to change policy to his style and interests.

Force can be considered a last resort. It is used when time is of the essence and no other alternatives are available or thought out. Threats of transfer, firings, and promotional possibilities are force techniques. These approaches are quite risky and there is still no valid reason why adequate information,

communication, and support cannot be provided.

CHOICE OF STRATEGY

Successful managers are consistent with several change factors while more unsuccessful managers are inconsistent. These include, choices in the speed and effort required, the amount of preplanning required, the amount of involvement by others and the emphasis each approach receives. Table seven outlines change strategies.⁵⁷

The four variable situations should determine the appropriate strategy. When increasing amounts of resistance are anticipated, slow strategic techniques are necessary. Power is another consideration. The more power the potential resistors have, the more quickly a manager should move: and conversely, the more power the manager has the more slowly he can move. Also, if a manager is dependent upon workers for support and knowledge, then the more slowly his techniques should be. And finally, the more urgent the need for change implementation, the more quickly one must act. Both social and economical reasons demand a choice appropriate to the variable, yet as far to the right on the strategic continuum as possible.

A manager can increase his or her chances of success by considering four areas, conduct and organizational analysis, analysis the factors relevant to the changes, selection of a strategy for change, and monitoring the implementation process.

An organizational analysis identifies current problem areas and their causes. The analysis gives weight and importance to these problems and the speed with which they must be addressed. Lastly, it should specify and recommend the changes that should be

made.

TABLE SEVEN

Strategic Continuum

<u>FAST</u>	<u>SLOWER</u>
Clearly Planned	Not clearly planned at the beginning
Little involvement by others	Lots of involvement by others
Attempt to overcome any resistance	Attempt to minimize any resistance
<u>KEY SITUATIONAL VARIABLES</u>	
The amount and type of resistance that is anticipated	
The position of the initiators vis-a-vis the resisters (in terms of power, trust, and so forth)	
The locus of relevant data for designing the change, and of needed energy for implementing it	
The stakes involved [eg. the presence of a crisis situation, the consequences of resistance and lack of change]	

The factors pertinent to policy changes include who may be resisting and why. Who has relevant information which will be needed and whose cooperation is essential. The relative power of resisters and implementors must also be considered.

The appropriate strategy for implementation should include both analysis and the necessity for speed. The amount of preplanning and the amount of worker involvement can then be determined. Specific tactics can be chosen for specific individuals and groups. Most important is to be consistent with one's self.

RESISTANCE TO CHANGE-CONCLUSION

Intrapersonal skills are the key to successful change

management. It is important to deal with people in much the same way as he would want to be treated. Managers should view their roles as facilitating communication and understanding between people. This produces less resistance, more common purpose, less anxiety, more acceptance of criticism, less griping and better overall productivity.

HOSPITALS

Much of the delivery of health care takes place in an organizational setting. These settings may be classified as hospitals (proprietary, nonprofit, and government), health maintenance organizations [HMO's], incorporated group practices, extended care facilities, nursing homes, or rehabilitation centers.

Hospital organizations differ primarily by ownership. The types of ownership include proprietary (privately owned), government (Federal, state and local), and voluntary (Catholic, community). Hospitals can also be characterized by the type of patients they treat, such as medical-surgical, geriatric, pediatric, psychiatric, or oncology.

Despite the apparent diversity among hospitals, all share a basic function; the provision of services, both technical and professional, required for the administration of health care. Hospitals are centers for diagnostic and treatment service to inpatients. They can provide medical, surgical, pediatric, psychiatric and rehabilitation services. Hospitals provide to inpatients, nursing, dietetic, pharmacy, laboratory, and X-ray technical services. Many of these same services are provided to

outpatients, usually in a clinic setting. Hospitals also provide medical education to the professional and technical staff, resources and facilities for medical research, as well as disease prevention and health promotion programs.

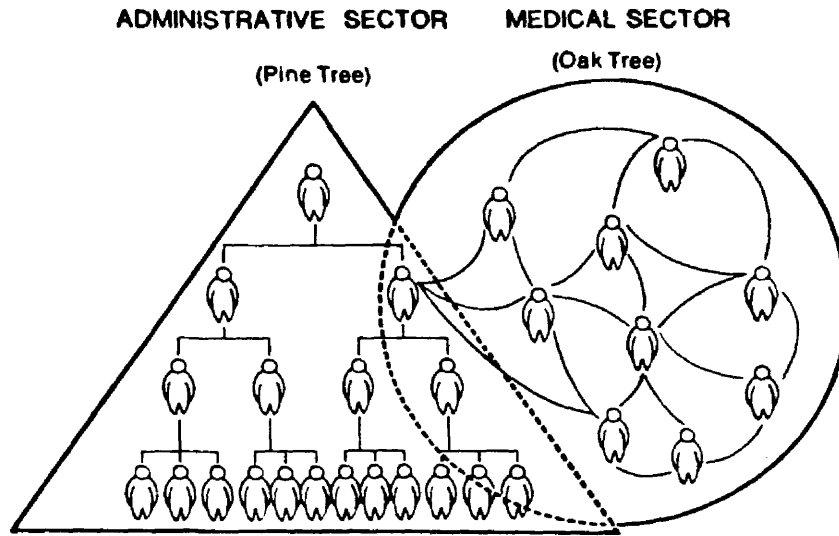
HOSPITAL ORGANIZATION

Hospitals are very complex organizations and as such they do not fit neatly into a single theory or model; instead they are an integration of models.

Hospital organizational models contain theoretical elements of Taylor, Simon, Weber and Gulick. There exists formal authority, hierarchy structures, division of labor, and formal lines of communication. Authors have described this as a pyramid or "pine tree" structure. These characteristics are exhibited by the hospital administrative structure, where ultimate responsibility is at the top and delegated downwards to subordinates. Hospitals also maintain a lattice or matrix structure among the professional staff. In this instance, hierarchy, when it exists, is less structured and less formal. Instead structure is organized around the patient and his care. The patient care team is formed upon the patient's admittance and dissolves upon his discharge. A new patient care team is formulated for each patient. Figure two illustrates the two types of organizations operating within hospitals.^{63,64}

Authority within hospitals is mixed. Authority possessed by the medical staff is based on knowledge possessed by resulting in expert power. Expert power is utilized to cut across traditional lines of authority. When areas of authority overlap, conflict, can result. Registered nurses are good examples of this conflict.

FIGURE TWO



Nurses can have several people in authority over them at one time. Conflicting orders from the head nurse, the chief of the service, and the attending physician can make life very difficult for a nurse in this dilemma; stress and conflict can result.

The governing board makes up the third element found in hospital organizational structures. The governing board has the legal authority and overall responsibility for the hospital, (legitimate power). The medical staff has the technical knowledge, (expert power) and the administrative staff has the responsibility for day-to-day operations, (coercive, reward and legitimate power).

THE GOVERNING BOARD

The governing board of a hospital may also be known as the board of governors, the board of trustees, or the board of directors. They are primarily responsible for the actions of the medical staff and for the hiring and evaluation of the hospital administrator or CEO. However, they also assume fiduciary responsibility for the institution by undertaking ultimate responsibility of asset management and policy setting. They also have the responsibility of protecting patients from preventable and foreseeable harm.

The members of hospital boards are for the most part, prominent members of a community. They volunteer their services for the reward of having rendered a service to their community. Board members either have special qualifications, are business executives, or are medical profession spokespersons.

Local Governing boards are also the rule for multihospital systems. Even though administrators usually find they must report

to both the board and the corporate staff, the role of the board is as autonomous as any local hospital. Their medical staff and fiduciary responsibilities are still retained.

In general, governing boards average 14 members, ranging from 8 to 25. They meet about ten times a year and serve an average of three years. They are primarily males (83%), with 55% being age 51-70. Most have at least a bachelors degree (80%).⁶⁵

There are primarily three functions of the board 1), controlling the hospital, 2) ensure community support, and 3) ensure accountability to the community it serves. More specifically responsibilities include:

- establishing policy and objectives
- maintain professional standards
- review administrative policy
- appoint and evaluate the administrator
- review and approve all major plans and programs
- advise the administrator in the operation and management of the institution
- coordinate the administrative, financial and community needs of the hospital
- provide financing and control of expenses

The board accomplishes their work primarily through the committee process, the Executive committee being the most important. This committee is composed of board officers and the chairmen of the standing committees. The executive committee assumes authority between regular meetings and in emergency situations. It reviews all committee reports before action is taken by the board as a whole.

Other committees of the Board include the Professional committee, the Finance committee, the Personnel committee, the Joint Conference committee, special committees and ad hoc committees.

THE ADMINISTRATOR

The administrator can also be known as the chief executive officer (CEO), the hospital director, or the president. His primary responsibility is the management of day-to-day operations of the hospital. As noted by Gulick, the CEO is responsible for planning, organizing, staffing, directing, coordinating, reporting, and budgeting, [POSDCORB]. The administrator undertakes these activities with the goal of accomplishing the hospital's mission effectively and efficiently. He must communicate effectively with the governing board, the medical staff and employees. He must deal with forces both inside and outside his institution, such as third party payers and community relationships.

The administrator is also the primary agent of change within the hospital. Often these changes affect the medical staff over which the administrator has very little control. The solution has been the extensive use of committees with members from both the hospital administration and the medical staff.

MEDICAL STAFF

The third group making up the organizational triad of hospitals is the medical staff. The medical staff is the organized group of physicians and dentists who attend patients and participate in other related duties of the hospital.

The chief of staff is the top elected officer of the organized medical staff. He serves as president at medical staff meetings and is chairman of the medical staff executive committee. He appoints medical staff committee members and enforces medical staff by-laws, rules, and regulations. The chief of staff may

also serve on the governing board. He acts as spokesman for the medical staff and presents his views and those of the medical staff to the CEO and the governing board.

There are usually a number of committees of the medical staff. The executive committee is the only one required by the Joint Commission for Hospital Accreditation, [JCHA], and it is responsible for the effectiveness of all medical activities of the staff. There may also exist a credentials committee, a medical audit committee, a utilization review committee and joint conference committee.

The medical staff departmentalizes its activities according to medical or surgical specialty. Department heads are appointed to medical, surgical, OB-GYN, oncology, pediatrics, psychology, and other services. Departmentalization usually occurs because the duties are too complex for the staff to handle as a whole.

Internship and residency programs are also the responsibility of the medical staff. They are essential to physician education, as well as supplementing patient care. The attitude of the medical staff is essential to a good intern-resident program. Good programs employ physicians who recognize these qualities and view them as educational experiences for the participants.

CASE STUDY

INTRODUCTION

Up to this point, this paper has reviewed comprehensively, the literature regarding organizational theory, behavior and resistance to change. This section will discuss the application of salient points from the earlier discussion to the specific case study. This discussion will demonstrate how this literature can be applied as a model by managers in hospital settings beyond that of the case study.

The first task will be to describe the setting and the particular characteristics of the setting which were helpful to the case study's successful implementation. The presence of all characteristics are not critical in each situation, but their presence will increase the chances for success of the CPDS implementation.

HURLEY MEDICAL CENTER

The service described in the case study is a clinical pharmacokinetic dosing service (CPDS), provided by the department of pharmacy at Hurley Medical Center. Hurley is located in Flint Michigan and serves the greater Flint and Genesee county community. HMC is a city owned institution with an eleven member board of managers, appointed by the Mayor of Flint. The day to day operations of the hospital are the responsibility of the hospital director, who is appointed by the board. The organizational chart (figure three) outlines the hierarchy and structure of Hurley Medical Center. The organizational chart is typical of many hospitals; it incorporates the governing board,

the administrator and his staff, and the medical staff. It is interesting to note the "pine tree" hierarchy of the administrative staff. What may not be so apparent from the organizational chart is the existence of the "oak tree" or collegial nature of the medical staff discussed earlier, and the influence the medical staff can have over the administrative staff.

Hurley can be classified as a city owned, 502 bed, (with 40 bassinets), short-term care, teaching institution. In 1985 there were 20065 admissions and 2771 births. The average daily census was 378 patients with an average occupancy rate of 73.5%. HMC employs 2130 personnel (other than physicians), with a payroll expense of \$54,064,000 and a total operating budget of \$106,023,000. Hurley offers a number of services including an intensive care and intensive cardiac care unit, a regional burn center, a regional dialysis unit and a regional neonatal intensive care unit. Appendix A lists the services HMC offers in more detail.

Hurley also administers an approved residency program for graduate medical students. Resident physicians rotate through various medical and surgical services as part of their post graduate medical education and to complete the residency requirements for the practice of medicine.⁶⁶

THE DEPARTMENT OF PHARMACY AND CPDS

The organizational structure of the pharmacy department is illustrated in figure four.

The top of the hierarchy includes the Director of Pharmacy, the Associate Director, and two Pharmacy Supervisors. There are

HURLEY MEDICAL CENTER

DEPARTMENT OF PHARMACY

Functional Organization Chart

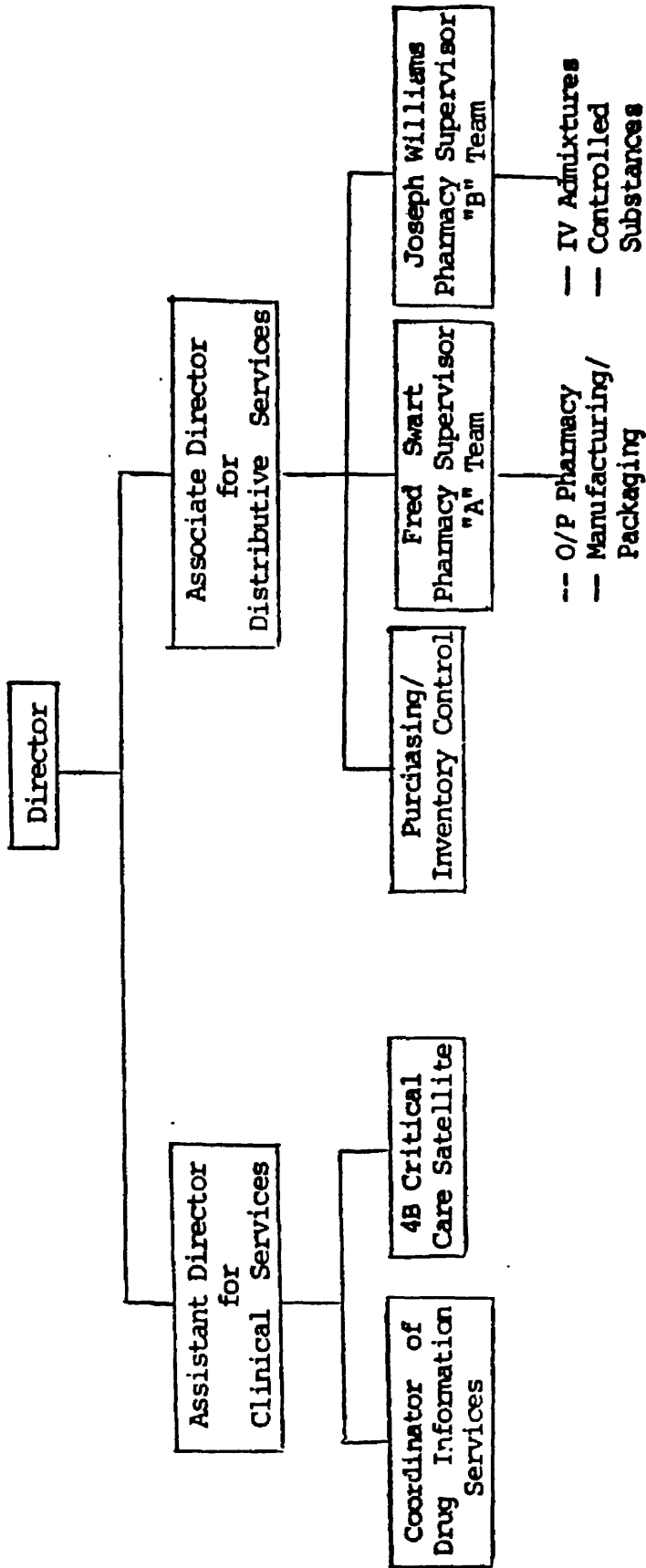


FIGURE FOUR

RPA/ab
June, 1986

nineteen staff pharmacists and 46 pharmacy technicians, porters, and clerical staff. For the purposes of processing medication orders more efficiently, the pharmacy is divided into two "teams". Each team is responsible for approximately one-half of the patient population and one pharmacy supervisor is assigned to each team.

The pharmacy also provides complete I.V. additive services by preparing and delivering I.V. antibiotics, primary I.V. solutions, hyperalimentations, (both adult and neonatal), and I.V. chemotherapy for inpatients and outpatients. Pharmacy also operates a decentralized satellite pharmacy for the intensive care, transitional and cardiac intensive care units, and an outpatient pharmacy servicing emergency room patients, outpatient clinic patients and employees.

The need for a clinical pharmacokinetic dosing service grew from the fact that physicians were not always dosing patients optimally for certain drugs, particularly the aminoglycoside antibiotics such as gentamycin, tobramycin, and amikacin. Zaske et.al. found that aminoglycoside dosing based on pharmacokinetic principles significantly improved outcomes for patient groups such as geriatrics, burn victims, obstetrical, and surgical.⁶⁷⁻⁷¹ The patients receiving these drugs were at higher risk as well as being hospitalized for longer periods of time than was necessary. The challenge for the pharmacy department was to implement a pharmacy based dosing service that would improve drug therapy, improve patient outcomes, and be cost effective via lower resource utilization and shorter length of stays.

After conceptualization of CPDS, a proposal for the service was developed and presented to hospital administration. The

proposal defined variables such as the scope of the service, what the patient population served would be, and what nursing units would be included. Also discussed was whether the new service would start out house wide or as a pilot program. The decision was made to begin implementation as a pilot program for the intensive care units, and base the service in the satellite pharmacy.⁷¹

MODEL DEVELOPMENT

Having described Hurley Medical Center and the Department of Pharmacy, the task now is to develop a model by highlighting portions of the theories described earlier which enhanced the implementation process of CPDS and would do so at other institutions. Afterwards, some specific characteristics of both Hurley Medical Center and the department of Pharmacy will be emphasized.

The first concept addresses the type of management style employed by the manager. The literature points out that many of the concepts of the classical management approaches, (eg. Simon, Taylor, etc) are important to operational efficiency. Briefly these included the concept of hierarchy, scientific management approaches, unity of command, homogeneity, and span of control. Managers who are placed within the administrative hierarchy of an institution, such as pharmacy, will find these structures already in place. They will already be a part of their management style. As the literature also points out, these approaches fail as a complete management approach and change vehicle. This is because the classical approaches do not address the human component within organizations. As with the case of Hurley Medical Center, managers who wish to institute progressive change should

incorporate the "human" factor into their management styles. These approaches were used at Hurley to facilitate the CPDS program. This included the sociotechnical approaches of Sofer and Perrow, which emphasizes the importance of flexibility and adaptation of the latest technology in an effort to provide the latest in health care developments. Also relevant were the approaches of Homans and the need for esteem, and those of Simon and March regarding decentralized decision making.

Once the need for a humanistic approach to management is recognized, organizational behavior theories can give managers the means to affect change in a positive way. The paper discusses these theories in detail. As with the case at Hurley, managers should come to know the values and attitudes held by his or her subordinates and then recognize that the goals of the institution may differ from the values and attitudes of the employee. This allows managers to address the conflict which may develop. To avoid or lessen conflict, the motivational, expectancy and behaviorism theories described above are important to understand and incorporate into one's management style. These concepts are significant and apply to all hospital settings and for all health care managers.

The recognition of one's management style and incorporation of humanistic approaches to management is a goal all hospital managers should achieve, despite the particular setting or planned innovation. What may vary for each manager are the techniques used to implement their changes. These include communication and leadership techniques. For managers, the key should be open communication on task oriented problems and avoidance of emotional

displays. However, the amount of information communicated is a judgement each manager should determine given the particular situation. Indeed, the more open and congruent a manager can be, the more understanding will be communicated. Understanding yields trust and cooperation and therefore a smoother implementation process.

At Hurley Medical Center, the communication process was not limited to the pharmacy staff or administration. Significant efforts were made to gain the support of the medical staff. This process included audio-visual presentations describing the need and significance of a clinical dosing service and the potential benefits to both the patient and to the institution. Indeed, a retrospective statistical study indicates the dosing service has shortened the average length of stay for patients utilizing the service, by six days.⁷³ Presentations were also made to the Pharmacy and Therapeutics committee, the institutional review board and the Medical Executive committees.⁷² Since nursing and lab are integral parts of the service, their cooperation was also sought and the importance of accurate data collection regarding blood sampling was emphasized.

Leadership style is also a part of a manager's style and there are some approaches which are more successful than others. As mentioned in the thesis, good leaders have both initiating structure (they are goal oriented), and considerate behavior, (they trust and respect subordinates). Path-goal leadership models indicate motivation of employees is enhanced when they understand the potential rewards. Effective leaders will emphasize the benefits of a planned change, thus minimizing resistance. The

CPDS at Hurley offered a less structured job task and work design, as well as the opportunity to associate with other professionals. The reward then, is a higher degree of self-esteem. It was also an opportunity for pharmacists to apply more sophisticated knowledge and training they would not otherwise be able to use.

Whatever style best suits a particular situation, the keys to successful implementation remain 1) complete understanding of the reason for the change and 2) well developed intrapersonal skills. The change is not just a theoretical change designed on paper in an office; it is a human change.

To complete the development of a theoretical model, this paper will discuss three important characteristics particular to Hurley Medical Center. The first is the fact that Hurley is a teaching hospital and administers an approved residency program. House officers in training, view the dosing service both as an educational experience regarding antibiotic therapy and as a supplement to patient care. Residents who take advantage of the dosing service have the option at any time, to accept or reject the services recommendations. Once confidence in the service grew, the pilot program was expanded to other nursing units where attending physicians can utilize the service as well.

A second organizational characteristic of Hurley Medical Center is that it serves a patient population which tends to receive aminoglycoside antibiotic therapy. Patients served by the regional burn unit, intensive care units, and dialysis units for example, benefit well from an aminoglycoside dosing service. Hospitals serving different patient populations may find a clinical dosing service equally as valuable, but may wish to

change the drug from aminoglycoside antibiotics to cardiac medications for example, or theophyllin, phenytoin or a number of others. Choosing a program which best suits the needs of each patient population is an obvious key to a program's successful implementation.

A third factor important in the implementation process is recognizing and addressing the needs of the medical staff. Having the support of the physicians is invaluable when seeking approval from administration. At Hurley Medical Center, implementation of CPDS was enhanced due to the support of the intensive care services chairperson. This individual took an active role in the implementation of CPDS and used her influence to persuade both the administration and medical staff of the benefits the dosing service could provide. If possible, other institutions seeking acceptance of new programs should also seek out a medical staff spokesperson to facilitate the implementation process.

CONCLUSION

This paper has promoted an understanding of how change and innovation occurs within health care settings. It has examined organizational theory and behavior, studied hospitals as organizations and presented an organizational model by developing a case study in which a new service was instituted.

To establish the theoretical framework for understanding change, organizational theory was discussed from the classical theorists to contemporary open model systems. This paper concluded that a single structural model is not available to describe the complexities characterizing hospitals today; instead

hospitals incorporate many models into one setting.

Organizational behavior was discussed to help managers affect productivity, absenteeism, turnover, and job satisfaction, ie. "PAIS". An understanding of the independent variables affecting "PAIS" allows managers to affect changes by satisfying the needs and expectations of subordinates. The independent variables include values and attitudes, behaviorism, group dynamics, communication, power and influence, and leadership.

The importance of work and organizational designs as they affect positive work performance were discussed. Managers must structure work and job expectations in such a way that organizational objectives are met as well as the higher job expectations of professionals. Managers must understand the technology of achieving organizational goals and how it's design affects employee behavior.

Minimizing resistance to change was discussed, recognizing resistance factors, the importance of communication, techniques available for implementing change, and the degree to which participation is allowed. Finally a strategic continuum is presented which outlines change strategies.

Hospitals as organizations were discussed pointing out the dual existence of formal hierarchical structures with informal, collegial structures. The role of the governing board, the administrative staff, and the medical staff were examined.

Finally Hurley Medical Center is examined, the Department of Pharmacy, and the implementation of the clinical pharmacokinetic dosing service; CPDS. A model was developed indicating the characteristics important to the successful implementation of

CPDS, thereby helping to predict the success and acceptance of this new service in other organizational settings.

In conclusion technology in health care is ever changing. Government regulation and accreditation standards demand high standards in all health care settings. Health care administrators are charged with the responsibility of providing high quality health care services. To do so, managers must examine old programs and institute new ones. This paper provides a framework for understanding change and innovation in hospitals, in theory and in practice.

APPENDIX A

HURLEY MEDICAL CENTER, FLINT MICHIGAN

Accreditation and Affiliations

Acute care hospital accreditation
Psychiatric hospital accreditation
Cancer program approved by the American College of Surgeons
Approved residency program by the Accreditation Council for
Graduate Medical Education
Medical School Affiliation
Hospital controlled professional nursing school-reported by
the National League of Nursing
Member of Council for Teaching Hospitals of the Association
of American Medical Colleges
Blue Cross and Blue Shield participant
Medicaid participant

Services

Ambulatory surgery services	Intensive care unit (cardiac)
Intensive care (mixed)	Pharmacy
Ultrasound	X-ray radiation therapy
Megavoltage radiation therapy	Radioactive implants
Diagnostic radioisotope facility	
Therapeutic radioisotope facility	
Histopathology laboratory	Blood bank
Health promotion	Respiratory therapy services
Premature nursery	Hemodialysis
Hospice	Burn care unit
Physical therapy services	Occupational therapy services
Psychiatric inpatient unit	Psychiatric outpt. services
Psychiatric partial hospitalization program	
Organized outpatient department	Emergency department
Social work services	Family planning services
Genetic counseling	Abortion services
Obstetrics	Home care program
Dental services	Speech pathology services
Hospital auxiliary	Volunteer services department
Patient representative services	Neonatal intensive care
Pediatric inpatient unit	CT scanner
Cardiac catheterization laboratory	
Alcoholism/chemical dependency outpatient services	

Classification

Government, non-federal, city
General medical/surgical
short-term

Inpatient Data

Beds - 502	Admissions - 20,065
Census - 378	Occupancy - 73.5%
Bassinets - 40	Births - 2,771

Expense

Total - \$106,023,000
Payroll \$ 54,064,000
Personnel - 2,130

Department of Pharmacy

Full unit dose drug distribution
Centralized and decentralized pharmacy services
Complete I.U. additive program
Chemotherapy program
Computerized patient profiles
Personnel - Director of Pharmacy
 Associate Director of Pharmacy
 Assistant Director of Pharmacy for Clinical
 Services
 2 Supervisors
 19 staff pharmacists
 46 technicians, porters, and clerical staff

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JOHN G. MANUTES

Date of Birth: Aug 14 1951

Marital Status: Married, 1 child

REGISTERED PHARMACIST

Michigan 1976

Florida 1977

EMPLOYMENT HISTORY

Hurley Medical Center

#1 Hurley Plaza

Flint Mich 48502

Nov 1980 - Staff Pharmacist-Provide pharmacy services in both
Present an inpatient and outpatient setting. Inpatient activities include computerized unit dose medication processing, provision of clinical pharmacy services as well as preparing primary I.U. solutions, I.U. piggybacked medications, I.U. chemotherapy, adult and neonatal hyperalimentation solutions. Outpatient activities include compounding and dispensing oral and parenteral medications, record keeping, and third party insurance processing.

Jan 1976 - Intern Pharmacist-Training period. Acquired general
Jun 1976 knowledge of hospital pharmacy.

K-Mart Pharmacy #4001

7 S. Glenwood

Pontiac Mich 48058

Mar 1978 - Pharmacy Manager-Responsible for prescription and
Nov 1980 DTC drug departments. Supervise eight people in high volume store.

Nov 1976 - Staff Pharmacist-Filled prescriptions, ordered
Mar 1978 prescription and DTC merchandise, completed weekly reports.

Jun 1976 - Intern Pharmacist-Training period. Preparation for
Nov 1976 state board examinations.

EDUCATIONAL HISTORY

1982-present University of Michigan at Flint-Masters of Public Administration, concentrating in health care.

1981-1982 University of Michigan at Flint-Non Candidate for degree

1973-1976 Ferris State College-Big Rapids Michigan, B.S.- Pharmacy

1971-1973 Mott Community College, Flint Michigan

1969-1970 University of Michigan at Flint

MILITARY SERVICE

1983-present U.S. Army Reserve, 1st LT., MSC, Pharmacy Officer

1970-1976 U.S. Army Reserve, SGT E-5, Training, Supply

INTERESTS Softball, Genealogy, Computers, Oncology

Reference on request