AN EVALUATION OF A MODEL OF AN INTERDEPARTMENTAL COMMUNICATION NETWORK BETWEEN LABORATORY AND NURSING PERSONNEL IN A LARGE HOSPITAL

By

MARY L. WATTS

Bachelor of Science

Northeastern Oklahoma State University

Tahlequah, Oklahoma

1967

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
MASTER OF SCIENCE
May, 1987

AN EVALUATION OF A MODEL OF AN INTERDEPARTMENTAL COMMUNICATION NETWORK BETWEEN LABORATORY AND NURSING PERSONNEL IN A LARGE HOSPITAL

Thesis Approved:

William R. Kenan

Thesis Adviser

Robert E. Nolan

John L. Beard

Norman N. Durham

Dean of the Graduate College

PREFACE

An evaluation was made of a model of a communication network between laboratory and nursing personnel in a hospital. A questionnaire was distributed to nurses and medical technologists to provide responses as a basis for the evaluation. Conclusions were drawn and recommendations for improving the communication network were made as a result of the evaluation.

The researcher is grateful for the assistance provided by the nurses and medical technologists who are part of the communication network and those who assisted in the refining of the questionnaire. A special thanks to Dr. Juanita Quinn who has given me moral support, encouragement, and many valuable suggestions.

I wish to thank Dr. Paul Harper for his assistance and committee members Dr. John Baird, Dr. Robert Nolan, and especially Dr. William Venable, committee chairman, for guidance and valuable time spent in assisting me and evaluating this study.

My deepest appreciation is extended to my husband, Dale, and to my children, for their support, understanding and patience.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

In the past twenty years there have been many changes in the American health care system. One of the changes has been that government legislation has changed the way health care is reimbursed. These changes in reimbursement have altered health care delivery. As legislation seeks to expand the scope of health care coverage, it has debated methods for controlling and regulating the cost of such care. One result of these changes is that there is a rising tide of resentment and hostility toward health care systems. The faith and trust that the public once felt in the health care professional has given way to suspicion. The public is subjected to mass media scrutiny of health care and regularly reports examples of physician greed, hospital mismanagement, and other sensational examples of how health care is "ripping off" the American consumer. Unfortunately, the health care professional has been slow to cope with the future shock created by this loss of innocence. A great challenge for scholars in communication is to assist health care administrators to understand the impact of this changing social attitude on the communication patterns of the health care system (Hite, 1977).

Communication is important in any organization. Organizations are composed of numbers of people who occupy specific positions or roles. The exchange of messages between and among these people takes

place over pathways called communication networks. A communication network may consist of only two people or an entire organization (Goldhaber, 1983). In health care, the importance of a good communication network is demonstrated in improved patient care. This research study examines one model of a communication network that was established in a private, comprehensive care hospital with approximately 725 beds. The hospital employs over 3000 people in many positions. The communication network in this study was established between nursing and laboratory personnel.

Problems previously identified by a survey in the hospital laboratory included low morale, lack of communication within the hospital as well as within the laboratory, and lack of recognition. The lack of recognition was both of personal achievement within the laboratory and the realization that few people outside the laboratory know what laboratory personnel do. A quality circle was set up to address the problems.

Within the quality circle, a suggestion was made to set up a communication network between laboratory and nursing personnel. The person making the suggestion had attended a regional laboratory management conference during which a presentation was made about a communication network between laboratory and nursing personnel in a hospital in Texas (Meyer, 1986). It was hoped that if a similar network was implemented in the laboratory in this study it would help alleviate some of the problems mentioned.

The suggestion for the network was reported to be well received by nursing personnel. Medical technologists in various departments of the laboratory were asked to volunteer to be liaisons for nursing

units. Nurses who were patient care supervisors on nursing units were paired with volunteer medical technologists for purposes of improving communication. The communication network was given the title of "Adopt-A-Unit."

Guidelines were established in order to encourage frequent communication. The guidelines included medical technologists visiting the unit in order to introduce themselves to the patient care supervisor contact and other personnel in the unit, distributing a card with name and telephone extension number for easy access, calling frequently to inquire about any needs or concerns the unit might have, and taking personnel on the unit for laboratory tours.

Statement of the Problem

Several articles have appeared recently in laboratory and medical technology journals about the problems in communication between nursing and laboratory personnel. These articles have originated in many states and in all sizes of hospitals. This indicated that the problem of interdepartmental communication was an ongoing one and was not unique to the hospital in this study. There is also a lack of research and study on communication in any health care system (Hite, 1977).

The hospital in this study was a large, privately funded comprehensive care facility. There was a large outpatient population in addition to approximately 725 inpatient beds. The hospital also receives patients from the surrounding communities. With over 3000 employees, accurate and timely communication of all kind of information becomes extremely important. Before the implementation of the Adopt-A-Unit network, communication between laboratory and nursing

personnel existed mainly over the telephone and mainly concerning problems after they had occurred. Many times "the lab" or "the floor" (nursing unit) was identified as a culprit. There was a lack of understanding of each other's roles and functions in the patient care process.

The specific problem with which this study dealt was the lack of knowledge about whether the communication network entitled "Adopt-A-Unit" was being used to improve communication between nursing and laboratory personnel.

Need for the Study

It was believed that the network between the laboratory and nursing units would improve communication between those hospital departments and create an awareness of the role that the laboratory plays in the medical care team. It was hoped that morale in the laboratory would improve because the personnel would feel that they were more involved in direct patient care as a result of seeing and hearing about the direct effects of laboratory data. Communication within the laboratory would also be improved because the technologists would have to communicate with other departments in the laboratory in order to answer questions outside their area of expertise.

The results of this study would determine whether the Adopt-A-Unit program was being utilized by laboratory and nursing personnel. The results would determine whether the program was considered by laboratory and nursing personnel as an improvement in communication between the departments. The results would also identify ways by which to improve the program.

Purpose of the Study

The purpose of the study was to determine whether laboratory and nursing personnel perceived that communication between them improved after the implementation of the Adopt-A-Unit communication network.

Questions to be answered by this study were, "Has the Adopt-A-Unit communication network that was established between laboratory and nursing personnel been used?", and "Has communication between the two departments improved after implementation of this network?"

Scope

This study included the nurses who were contact persons on the nursing units and the technologists in the laboratory who were involved in the Adopt-A-Unit communication network.

Assumptions

For the purposes of this study, the assumption was made that the responses by the nurse contact persons represented the attitudes of all personnel on the nursing units regarding communication between laboratory and nursing personnel. The assumption was also made that the responses of the medical technologist contact persons represented the attitudes of all personnel in the laboratory regarding communication between laboratory and nursing personnel.

Limitations

The study was conducted under the following limitations:

1. The study was limited by the size of the population. There

were 33 volunteers who were the contact persons on the nursing units and 34 volunteers who were the contact persons in the laboratory.

Limitations inherent in the questionnaire technique included low response rate, subjectivity in interpretation, lack of clarity in responses, and the risk of not asking important questions.

Definitions of Terms

The following terms are defined for purposes of the study:

Adopt-A-Unit - The name of the communication network established between laboratory and nursing staffs.

Communication Network - also called Adopt-A-Unit.

Contact Person - The person on either the nursing or laboratory staff who volunteered to be part of the communication network.

Program - The system of communication called Adopt-A-Unit.

Nursing Unit - A section, or floor of the hospital that consisted of a nursing station and patient rooms. Each nursing unit focused on a different type of patient care.

Patient Care Supervisor - The nurse head of a nursing unit.

Medical Technologist - degreed and certified individual responsible for carrying out laboratory testing.

Summary

The introductory chapter presents background information for the study. The problem was identified as a lack of knowledge about whether the communication network entitled "Adopt-A-Unit" was being used to improve communication between nursing and laboratory personnel. The need for the study was outlined. The purpose of the study was to

determine whether laboratory and nursing personnel perceived that communication between them improved after the implementation of the Adopt-A-Unit communication network. The scope of the study included contact persons involved in the communication network. Assumptions and limitations were outlined and a definition of terms was included.

Chapter II contains a review of literature pertaining to organizational communication in general and its importance. The chapter also includes a review of literature pertaining to over-all communication in hospitals and between nursing and laboratory departments of hospitals. Chapter III explains the procedures used in the study, including the population, data collection, and analysis of the data. Chapter IV describes the findings of the study with responses to the questionnaires presented in table form and discussed. Chaper V contains the summary of the study and the researcher's conclusions and recommendations.

CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the literature in the following areas (1) definitions of organizational communication, (2) the need for and importance of good communication, (3) communication in hospitals, and (4) nursing - laboratory communication.

Organizational Communication Definitions

There are as many organizational communication theories and definitions as there are authors. Concepts common to most of the theories include: exchange of information as messages within an organization; involvement of people and their feelings, skills, and motivations; environmental influences; and the realization of organizational goals. The most concise definition stated: "Organizational communication is the process of creating and exchanging messages within a network of interdependent relationships to cope with environmental uncertainty" (Goldhaber, 1983, p. 17). Pace (1983, p. 35) defined organizational communication in part as "the display and interpretation of messages among communication units." The "units" are the people in positions within the organization.

There are several types of communication within organizations. They include upward, downward, or horizontal depending on the position in the organizations of the people communicating. There is an absence

of research in the area of horizontal communication, but few people deny its importance in the operation of the entire communication system of an organization. In 1916 Fayol proposed his classic "bridge" of horizontal communication in which the traditional vertical authority hierarchy is "bridged." Because of this bridge messages travel only one way, horizontally, which increases the accuracy and speed of the message. The people communicating horizontally are usually on the same organizational level of authority. The messages communicated most often have several purposes. One is task coordination in which department heads meet to discuss how each department contributes to the system's goals. Another purpose is information sharing in which members of two or more departments meet to introduce new data or changes. Other purposes are problem solving and conflict resolution. Despite the apparent importance of horizontal communication, several factors tend to limit its frequent use: rivalry, group specialization, and lack of motivation (Goldhaber, 1983).

The model of a communication network used in this study is a type of cross-channel horizontal communication. Cross-channel is information sharing across functional, or work boundaries. This communication is among people who are neither subordinate nor superior to one another (Pace, 1983). In order to communicate effectively across departmental boundaries, pathways called communication networks are established. The network may consist of two or more people. The relationships of the individuals involved are defined by the pattern of interaction connecting each individual to the flow of information in the network (Goldhaber, 1983).

Importance of Communication

People communicate with one another to interact, share and cooperate in order to reach common goals. As they communicate, they gain insight and knowledge about other people and their experiences. An organization is responsible for maintaining an ideal climate and environment in order to enhance relationships, to the mutual benefit of both the employees and the organization (Goldhaber, 1983). The information processing system of an organization influences the way problems are solved and coped with. Part of the problems with the information system is in the information-processing problems of its people. "Although effective communication does not guarantee an efficiently operating organization, ineffective communication creates a condition that virtually precludes organizational efficiency from occurring" (Pace, 1983, p. 199).

By the process of communication, individuals can be creative about problem solving. Accurate information is critical for organizational efficiency. It allows for better adaptation to changing circumstances. Organizations must recognize that changes are occurring and respond appropriately. One way to obtain more accurate information is through the use of feedback mechanisms. Verbal communication about tasks and problems allows for high feedback relevant to the problem of quality service. High feedback allows for problem detection as well as problem solving. "As organizations attempt to monitor all aspects of their various production processes, they are forced to rely more and more upon verbal task communications as the major channel of feedback" (Hage, 1974, p. 39).

Organizational structures are becoming more diversified. As specialization increases, the volume of communication increases because of the necessity of coordinating the diverse aspects. The major direction of this increased flow is horizontal, especially cross-departmental, at the same authority and status levels. Active organizational wide committees and between department communication links are more likely to utilize information feedback. The flow of communication across departments is increased as power is dispersed in an organization (Hage, 1974).

Communication in Hospitals

Communication in hospitals, as well as any other organization, is vitally important. Many different people from many different areas of the hospital are involved in the care of each patient. Professional workers must consult and feel free to contact a wide variety of other professionals. In a study of interrelationships of communication pathways in a hospital, professionals who work with the clients were seen as a key to the treatment process. Coordination and control of this process becomes critical for production. It was found that when the production process is coordinated by feedback, there must be a number of pathways for mutual adjustment. An interesting observation that was made was that this process of feedback is most likely to occur when the workers conferred with other workers rather than when department heads conferred with other department heads (Hage, 1974).

In the study of a community hospital, the organization was described as being representative of an increasingly common organizational model, the professional-organizational form. The essential

distinguishing characteristic of this kind of organization is that most of the work is done by people who belong to professions or other occupations that require long periods of training. The professions also place an emphasis on the acquisition of knowledge through journal reading and on continued learning of new techniques and new skills (Hage, 1974). A large amount of work has gone into how to control the client, but less has been done on how to regulate the benefits of professionals. Regulation of behavior becomes more of a problem with those occupations and professions that have power and prestige. The characteristics of power and prestige among professionals are critical elements in the inter-department flow of communication. One of the main pathways in communication within organizations is between professional workers of various departments. This is what is meant by an "organic network - a worker is most likely to confer with those in other departments irrespective of their authority or status" (Hage, 1974, p. 173).

In doctoral research that was surveyed, it was noted that academicians studying health care have been slow to accept the system's view of health care. Most of the research focused on the obvious communication roles of the nurse, physician, their interactions as professionals, and their interactions with the patients. They are important, but are not the major dimensions of health care organizational communication. Nor are they the areas where the real communication crises are happening (Hite, 1977). There is a need to change direction and spend less time examining the transactional roles of the patient, nurse, and physician and spend more time on the other equally important aspects of the health care system. It would be useful to look at communication problems within the various service

areas. Research in these areas would be to legitimize the utility of communication research across the entire spectrum of the hospital (Hite, 1977).

Nursing - Laboratory Communication

There are many blocks to communication between nurses and medical technologists, especially in a large hospital. There is a lack of personal contact because personnel other than nurses and medical technologists are responsible for delivery and retrieval of specimens from the nursing units to the laboratory. There are less opportunities for contact because there are computers which process data entry and retrieval and medical records from which to obtain information. As a result of these intermediators, much of the communication left between nurses and medical technologists is negative, consisting of problems and/or questions.

There is a lack of research on nursing - laboratory interdepartmental communication. A search of literature revealed some models of communication that have been established. One hospital hired a technologist-coordinator to relay complaints and suggestions from the lab to nursing personnel. Previous to this time, the traditional ways of registering and receiving complaints had been in force. One traditional way was that of the incident report. This required paperwork and time in investigating the complaint. The lab in this study established three goals (a) to improve communication, (b) to identify and characterize problems, and (c) to solve these problems in a nonaccusatory way. The way in which this coordinator accomplished the goals was to make rounds of all the nursing units in order to

search for problems. The coordinator then documented and informed the appropriate lab department of the problem. In addition, problems and complaints from the lab were relayed to nursing. Benefits from having this coordinator included more positive relationships with the nursing staff, more efficient communication between departments, effective correction of problems, and better characterization of legitimate complaints (Umiker, 1983).

In another hospital, a nurse-coordinator was hired to resolve nursing-laboratory problems. This coordinator established "get acquainted" sessions and inter-departmental tours, and initiated written complaint forms which were then reviewed by the departments. This position fostered team work and better communication, and resolved misunderstandings. All of this leads to better services and patient care (Record, 1985).

In the Texas Model on which the communication network in this study was based, a laboratory-nursing liaison network was established. Four technologist volunteers were solicited to be the liaison. Arrangements were made with their supervisors to allow time off from technical duties. Specific goals and objectives were established as guidelines. The program was extended to include outpatient services. Benefits realized from the network in the Texas Model included improved inpatient and outpatient services, better relationships between laboratory and nursing personnel, and improved problem solving. The athor of the article about the Texas network noted that nurses' image of the laboratory was better. Their technologists also benefited from the program. There were then fewer communication problems and an empathy for the other professions had been developed. The technologists

were then more aware of the important role they played in patient care. Sensitivity to the concerns of others was listed as an additional benefit (Meyer, 1986).

In a recent survey of the laboratory in this study, two questions were asked about the Adopt-A-Unit program. Using a numerical scale of one (Strongly Agree), two (Agree), three (Neutral), four (Disagree), and five (Strongly Disagree), respondents were asked whether (a) I feel the Adopt-A-Unit has improved relations between the lab and the nursing units; and (b) I feel the Adopt-A-Unit has helped in solving problems between the lab and nursing units. Eighty-six out of 150 questionnaires were returned for a response rate of 57 percent. Responses, which included those from lab personnel other than medical technologists, were added together and an average was obtained. For question a on improved relations, the average response was 2.4, between "agree" and "neutral." For question b on solving problems, the average response was 2.5, between "agree" and "neutral."

Summary

The literature reviewed has defined and shown the importance of and need for better organizational communication. Hospital communication was reviewed as well as some models of communication between laboratory and nursing personnel. Benefits of improved communication between lab and nursing staffs were noted.

CHAPTER III

PROCEDURES

This chapter describes the procedures for collecting data for the specific purpose of evaluating the communication network between nursing and laboratory personnel. Procedures included (1) selection of the subjects, (2) creation of the survey instrument, and (3) analysis of the data.

Population

The population selected for the study was 67 people who served as contact persons in the communication network implemented between laboratory and nursing personnel. These contact persons were nurses who participated from nursing units throughout the hospital, the majority of whom were patient care supervisors, and the medical technologists in the laboratory who volunteered to be contact persons for the nurses.

Data Collection

The method selected for collection of the data was the questionnaire. This was chosen over other methods such as the interview, observation, and examination of records. One advantage of the questionnaire over observation is that it is not practical to observe an informal communication network in action. It would be hard

to predict when to observe and what to observe. Records could not be examined because participants kept no records of contacts made. The hospital had a busy environment in which shortage of time was a factor for the subjects to be surveyed. Patient care could not be interrupted. An advantage of the questionnaire administered in this environment was that it took less time than an interview. Subjects were usually familiar with the format of a questionnaire and responses were anonymous.

In a study or research done on communication in hospitals, the researchers found that the questionnaire survey was the method used most frequently for collecting data. It was the most popular and most convenient method. "Certainly it is far more difficult to develop control conditions and use experimental methodologies and one has to be careful of experimental research that might contaminate the quality of care afforded patients" (Hite, 1977, p. 9).

The questionnaire was designed to answer the questions described in the purpose of the study, "Is the communication network between the lab and nursing personnel being used?" and, "Has this network improved communication between the departments?" Open-ended and short answer questions were devised. Two separate questionnaires were prepared, one for each group of subjects. The wording was changed as necessary in both to reflect the group that was being questioned. Two additional questions were asked of the medical technologists in order to discover any changes in morale and intra-departmental communication detected as a result of the communication network.

Before the questionnaire was distributed, it was reviewed by a jury. The purpose of this review was to examine the content of the

questionnaire for validity. Two of these people were from nursing administration and two were medical technologists who worked in the hospital, but who no longer worked in the laboratory. Because of this review, wording and grammatical revisions were made in the format of the questions. This group had suggestions for questions about establishing demographic information and how to put the questions in the proper sequence.

A pilot study of the questionnaire was done before it was distributed to the subjects. Six nurses and four medical technologists who were not part of the communication network agreed to review the questionnaire for the pilot study. The purpose of the pilot study was to establish the reliability of the questionnaire. The ten pilot test participants answered the questions and discussed their responses. Changes were made as a result of their suggestions. Specifically question two, concerning frequency of communication before Adopt-A-Unit, was changed to identify the reasons for communication as calling results, asking or answering questions, or problem solving. The wording in two other questions was changed slightly in order to increase understanding.

Analysis of the Data

In order to analyze the data from the questionnaire, the responses of the subjects were compiled. The findings were organized according to the survey questions, were discussed, and presented in table format. Comments accompanying the responses were also noted. Descriptive statistics such as counts and percentages were used in the analysis.

Summary

This chapter has included the procedures for collection of the data in the study. The population was described. The questionnaire was chosen as the method of data collection. Reasons for selection of the questionnaire were outlined. A description of the jury review and pilot studies of the questionnaire was included in this chapter as well as methods of analysis of the data.

CHAPTER IV

FINDINGS

This chapter is organized to present a description of the results of the questionnaire that was distributed to the Adopt-A-Unit participants in the laboratory and on the nursing units. The chapter is organized into three parts: (1) responses of the nurses, (2) responses of the medical technologists, and (3) comparison of the responses.

Responses of Nursing Personnel

A summary of responses to questions four through 12 is presented in Table I. A total of 33 questionnaires were distributed with 23 returned for a response rate of 70 percent. The nurses who responded to the questionnaire were patient care supervisors on various nursing units in the hospital. As determined from responses to question one, the majority had worked at the hospital from six to 20 years, with one who had worked less than six years and one who had worked over 20 years. The types of nursing units were not identified in the second question but several indicated they had frequent communication with the lab. There was no pattern established in the responses which would indicate a specific frequency of communication. Before the Adopt-A-Unit was implemented, 14 respondents indicated that they called a specific department when they had a question. Six indicated that they talked to whomever answered the phone, some used a combination

TABLE I

RESPONSES OF NURSING PERSONNEL TO QUESTIONNAIRE

	Question	Yes	No	Don't Know N/A
4.	Calling the laboratory contact	9	10	3
5.	Improvement in communication	12	8	4
6.	Changes in attitude of lab toward nursing	12	7	4
7.	Changes in attitude of nursing toward lab	10	8	4
8.	Regular contact	7	15	
9.	More comfortable calling	12	10	
10.	Problems resolved	5	12	3
11.	Feedback about problems	9	7	6
12.	Continue program	17	4	1

depending on the circumstances, and three indicated that they called for someone by name. Nine nurses indicated that since the implementation of the communcation network, they called the laboratory contact person when they had a question or a problem. Ten indicated they did not, with three respondents indicating "not applicable" or "sometimes." From the responses, there was no relationship established in calls made to a specific person in the laboratory before or after implementation of the network. Comments on the questionnaire indicated that several nurses forgot about their contacts or they were never notified of whom to contact. Several nurses commented about the need for immediate action and direct contact with the laboratory department or supervisor involved as a reason for not using their contact person.

When asked if there had been an improvement in communication between the two departments, 12 indicated "yes", eight responded "no", and four responded "not applicable" or "don't know". Comments accompanying the responses indicated that there had not been any problems before or the service had not been used enough to be beneficial. Respondents indicating "yes" commented that communication was more open and answers to questions were obtained quickly and more easily. Several nurses were reassured that there was someone to call on in case of need and that someone was taking responsibility for problem-solving and followed through on problems. Other comments indicated that making one phone call to a contact person saved time wasted in talking to several people in order to solve a problem or answer a question.

In response to the question about a change in attitude of lab personnel toward nursing personnel, 12 indicated there had been a

change, seven indicated no change and four responded "don't know". Comments about what the changes had been included a better understanding of nurses' problems, friendliness, helpfulness, and more personal attention. Several respondents indicated there was no change because there had been no problems in attitude before and they did not notice any changes because of this program. In response to the question about a change in attitude of nursing personnel toward lab personnel, ten indicated "yes" there had been a change, eight indicated "no", and four indicated "don't know". Comments about what the changes were included more openness, friendlier, and better communication. Several nurses felt that problem solving efforts were positive and more productive because "they" or "the lab" had a name and that someone will take charge of handling problems.

When asked if the laboratory contact communicated regularly, seven responded "yes" and 15 responded "no". Comments indicated that communication was "as needed" or most frequently "once a month". Several respondents indicated that they had no contact. Twelve respondents indicated they felt more comfortable calling the lab for a contact person and ten indicated "no". Several respondents indicating "no" made the comments that they felt comfortable before the network, so there had been no change. Again there were comments indicating some had not been contacted by lab personnel.

To the question about problem resolution as a result of this program, six indicated there had been problems solved, 12 indicated "no", and three said "not applicable". Some problems that were solved were briefly described. Several respondents indicated there were no problems to solve or they did not use their contact person to help

solve the problem. In response to the question about receiving feedback about problems, nine indicated they had received feedback, seven responded "no", and six responded "not applicable".

When asked if the program was worth continuing, 17 responded "yes", four "no", and one "don't know". Comments included with the no responses contained the information that the network was not used or no one from the lab had contacted their unit. Some suggestions for improvement were listed. These included a structured time frame for the lab person to contact the nurses, more contact from the lab person, and a different person to contact their area. One person suggested that other areas in the hospital utilize this program.

Responses of Laboratory Personnel

A summary of responses to questions four through 12 is presented in Table II. A total of 34 questionnaires were distributed to laboratory personnel with a return of 19 for a response rate of 56 percent. Laboratory personnel responding to the questionnaire were medical technologists. As determined from responses to question one, the years of working for the hospital ranged from less than five years to 20 years. Responses to questions two and three on the questionnaire indicated that these laboratory personnel had frequent communication with nursing personnel before and after the implementation of the Adopt-A-Unit network. There was no noticeable increase after the network was established. When asked if their nursing unit had contacted them since the implementation of the Adopt-A-Unit program, 11 responded "yes" and eight responded "no". Comments accompanying the no answers indicated that they assumed there was a lack of problems or questions

TABLE II

RESPONSES OF LABORATORY PERSONNEL TO QUESTIONNAIRE

	Question	Yes	No	Don't Know N/A
4.	Calling the nursing contact	11	8	
5.	Improvement in communication	13	5	1
6.	Changes in attitude of lab toward nursing	12	3	3
7.	Changes in attitude of nursing toward lab	12	1	6
8.	Regular contact	2	16	
9.	More comfortable calling	15	3	
10.	Problems resolved	13	5	
11.	Feedback about problems	5	10	3
12.	Continue program	18		1

or a lack of time to call. A few comments indicated that the laboratory person did not follow through on contacting their assigned unit.

In response to the question regarding improved communication between the two departments, 13 answered "yes" there was an improvement, five said "no", and one said "no change". Comments indicated communication had improved because the nurses felt free to ask questions, seemed pleased to have one person to call, there was a greater awareness of each others' functions, and problems had been solved. Comments accompanying the no responses indicated that some units did not have many problems for the contact person to deal with or did not use the lab as much as other units did.

Responses to the question about changes in the attitude of lab personnel toward nursing personnel indicated that 12 thought there were changes, nine said "no", and three said "don't know". Positive comments were that the program had made people more aware of their phone manners, had reminded everyone that they were dealing with people and not just departments, had made lab personnel feel like more of a part of the health care team, and had made people aware of each others' problems. It was felt by some that the program had made the laboratory employees more understanding, tolerant, and cooperative. Some commented that the program was too one-sided, that the laboratory was fixing all the problems. When asked about changes in the attitude of nursing personnel toward lab personnel, 12 indicated "yes" there were changes, one said "no", and six said "don't know". Comments were made that the nurses seemed appreciative of the lab's effort, were more friendly, and liked the personal contact. Several comments indicated that, although the person they contacted had a greater appreciation

of the lab, other nurses' attitudes might not have changed.

Two respondents said "yes", their nursing unit communicated regularly, and 16 said "no". Some comments made suggested that, as a reason for the no answers, their units did not have many problems. Responses to the question about feeling more comfortable calling the nursing unit were 15 "yes" and three "no". Several respondents indicated they had had no problem before. Some respondents admitted not contacting their units as they should.

Many lab people were able to solve problems for their units, 13 indicated "yes" and five "no". The problems were briefly described. They included deciphering doctor's orders, questions about specimen drawing, problems in communication, and questions about when test results would be available. Some responded that there were no problems for them to solve or questions to answer. Ten people responded "no" when asked if they received feedback concerning the problems that were discussed, five said "yes", and three said "not applicable".

After the Adopt-A-Unit was established, problems were identified in the lab. The lab contact people were asked if the program affected morale in the lab. Eleven responded "yes", four said "no", and four said "don't know". Most of the 11 indicated the effect had been good. The question was misinterpreted by several people who overlooked the word "laboratory" and commented about morale between the two departments, nursing and laboratory. The question about the Adopt-A-Unit affecting communication in the laboratory was also misinterpreted to mean between the departments. Thirteen people said communication had been affected, three said "no", and three said

"don't know". Some comments showing that the question had been interpreted correctly indicated that communication was better because the contact persons had to communicate with people in other areas of the lab in order to answer questions or solve problems.

In answer to the question about continuing the program, 18 responded that it was worth continuing and one said "not sure". Comments about improving the program included more inservice for the units, an open house reception for the contact persons, keep nursing unit up-to-date on changes, have a set time to meet with the nurse and give tours of the laboratory. Suggestions were also made about one contact person for several units that do not use the lab as much as others do.

Comparison of the Responses

A summary of the compared responses from nursing and laboratory personnel is presented in Table III. Question one on both questionnaires, concerning how many years worked at the hospital, was used to determine demographic information. There was no relationship established by the responses which would indicate that length of employment affected frequency of communication between the departments or whether the nurses asked for a specific person by name, asked in question three on the nursing questionnaire.

Question two on both questionnaires was used to establish frequency of communication between departments. There was no pattern identified which would indicate a specific frequency of communcation. In comparing responses to questions two and three on the nursing questionnaire, no pattern is identified as to whether communication to a specific person

TABLE III

COMPARISON OF THE RESPONSES BETWEEN LABORATORY AND NURSING PERSONNEL TO QUESTIONNAIRE

	Questions	Nurses			Laboratory		
		Yes	No	Don't Know	Yes	No	Don't Know
4.	Calling the contact person	9	10		11	8	
5.	Improvement in communication	12	8	3	13	5	1
6.	Changes in attitude of lab toward nursing	12	7	4	12	3	3
7.	Changes in attitude of nursing toward lab	10	8	4	12	1	6
8.	Regular contact	7	15		2	16	
9.	More comfortable calling	12	10		15	3	
10.	Problems Resolved	6	12	3	13	5	
11.	Feedback about problems	9	7	6	5	10	3
12.	Continue Program	17	4	1	18		1

in the laboratory increased after the implementation of Adopt-A-Unit. Comparison of responses to questions two and three on the nursing quesionnaire did not demonstrate any increase in communication since the implementation of Adopt-A-Unit. Comparison of responses to questions two and three on the laboratory questionnaire did not demonstrate any increase in communication since the implementation of Adopt-A-Unit.

In response to question number four about whether the laboratory person was contacted with a question or a problem, the responses were almost equally divided between "yes" and "no" for both laboratory and nursing personnel.

Question five asked if there had been an improvement in communication between the two departments. The majority of both laboratory, with 13 out of 19 responding "yes", and nursing personnel, with 12 out of 23 responding "yes", felt there had been an improvement. When asked about changes in attitude of laboratory personnel toward nursing personnel, question six, most felt there had been a change. Twelve nurses out of 23 responded "yes" and 12 out of 19 medical technologists responded "yes". Most technologists with 12 out of 19 yes responses, felt there was a change in attitude of nurses toward laboratory people, while responses from the nurses were more evenly divided between yes and no responses.

Nursing and laboratory personnel were in agreement for question eight, which asked if there was regular communication from the laboratory contact. The majority of both, 15 out of 23 no responses for nurses and 16 out of 19 no responses for the laboratory, indicated there was no regular contact. The majority of medical technologists

with 15 yes responses out of 19, felt more comfortable calling their contact person. The yes and no responses from the nurses were almost equally divided.

When asked if any problems were able to be resolved as a result of this program, 12 out of 23 nurses responded "no" while 13 out of 19 medical technologists responded "yes". Responses from nurses were about even for "yes", "no", and "don't know" for question 11, which asked if feedback was received about problems discussed. Ten out of 19 medical respondents answered "no" to this question.

A majority of nursing and laboratory personnel responded "yes" to the question of continuing the program. Seventeen out of 23 nurses responded "yes" for continuing and 18 out of 19 medical technologists responded "yes".

Responses from the laboratory showed a stronger direction and a greater numerical difference between yes or no answers to most questions. More definite conclusions can be drawn from these numbers. Responses from the nurses were frequently mixed equally between "yes" and "no" which resulted in less numerical difference between the answers. Conclusions were harder to define. A probable reason for this is because the laboratory suggested and implemented the network. This led to more definite responses from the medical technologists.

From examination of Table III, which compares the responses, some similar and dissimilar response patterns can be identified. Table IV shows the responses which were similar and Table V shows the responses which were dissimilar. Responses in which there was no pattern of similarity or dissimilarity are not listed in a separate table.

Responses to question five indicate a greater number of "yes"

TABLE IV

COMPARISON OF SIMILAR RESPONSE PATTERNS

	Questions	Nurses		Laboratory	
		Yes	No	Yes	No
5.	Improvement in communication	12	8	13	5
6.	Changes in attitude of lab toward nursing	12	7	12	3
7.	Changes in attitude of nursing toward lab	10	8	12	1
8.	Regular contact	7	15	2	16
12.	Continue program	17	4	18	1

TABLE V

COMPARISON OF DISSIMILAR RESPONSE PATTERNS

	Questions	Nurses		Laboratory	
		Yes	No	Yes	No
9.	More comfortable calling	12	10	15	3
10.	Problems resolved	6	12	13	5

responses from both nurses and medical technologists. Comments accompanying the responses indicated a reason for some of the "no" responses was that communication was not a problem before so there was no improvement as a result of this network. Questions six and seven asked if there was a change in the attitudes of nursing and laboratory personnel toward each other as a result of the network. Most of the responses from both groups indicated "yes". There was a greater numerical difference between the "yes" and "no" responses from the laboratory than from the nurses. This would indicate that the laboratory perceived a problem with attitudes toward each other before implemenation of the communication network. Responses to question eight about regular contact between the nurses and medical technologists agreed that there was no regularity in contact. Both nurses and medical technologists agreed that the program should continue.

Nurses and medical technologists disagreed about being more comfortable calling each other since the Adopt-A-Unit was implemented. Medical technologists had a greater numerical difference between "yes" and "no" responses, indicating that the communication network had made them feel more comfortable in calling the nursing contact. Nurses' responses were more evenly divided between "yes" and "no" responses, indicating that the communication network made no difference in their comfort level in calling their contact person. The largest difference in responses was about problems being resolved. The majority of nurses felt there had been no problems solved while the medical technologists felt there had been problems solved.

Summary

The findings from the questionnaires were presented in this chapter. The responses from the nurses and the medical technologists were presented in separate tables and the findings discussed. One of the most important findings was an improvement in communication between the two departments as a result of the communication network. There were also positive changes in the attitudes of the nurses and medical technologists toward each other, and problems were solved as a result of the network.

Responses from the nurses and medical technologists were compared and similarities and dissimilarities were discovered. These were discussed and presented in table form. The most notable dissimilarity was in problem resolution. Medical technologists indicated they had solved problems while the majority of the nurses responded that they had not solved problems.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is divided into three sections. The first section presents a summary of the study. The second section presents the researcher's conclusions. Recommendations are contained in the third section.

Summary

The purpose of the study was to determine whether laboratory and nursing personnel perceived that communication between them improved after the implementation of the Adopt-A-Unit communication network. Results of the study will be used to improve the communication network. The study sought to answer the following questions: "Has the Adopt-A-Unit communication network that was established between laboratory and nursing personnel been used?" and "Has communication between the two departments improved as a result of this program?"

The researcher conducted a review of the literature. The review indicated that not much literature has been written on communication networks between any department hospitals. Most research on communication in hospitals has been done on doctor-patient, doctor-nurse, or nurse-patient relationships.

A questionnaire was designed to answer the study questions. The questionnaire was submitted to a jury review and a pilot study with

both nursing and laboratory personnel. After revision, the questionnaire was then distributed to the Adopt-A-Unit contact persons on nursing units and in the laboratory.

Conclusions

Conclusions about the use of the Adopt-A-Unit communication network can be drawn from the comparison of responses to the questionnaire distributed to nursing and laboratory personnel. There was a clearer direction in the responses from the medical technologists than from the nurses. This is probably because the laboratory suggested and implemented the network. The responses from the nurses showed less of a definite pattern.

Question number one was used to establish demographic information. There was no relationship identified between length of employment and frequency of communication between nursing and the laboratory. No conclusions can be drawn concerning frequency of communication between the departments and the implementation of the communication network. If the nursing units had been identified by the type of patient care given, it would have been possible to determine which units use laboratory services the most.

Responses were unevenly mixed between "yes" and "no" for both nurses and technologists regarding calling the laboratory contact person when the nurse had a question or a problem. One of the reasons for not calling the laboratory contact was made apparent when technologists admitted they had not called their nursing unit, and nurses indicated they had not been called by their laboratory contact. Comments from several nurses indicated that, depending on the situation,

they did not need to call their laboratory contact. Some did not want to use the network. From the number of yes responses, a conclusion can be made that the communication network is being used by the hospital personnel who wish to use it. A conclusion can also be made that several medical technologists who volunteered to participate have not followed through for whatever reason.

The conclusion can be made that the communication network has improved communication between nursing and laboratory personnel because a high number of nurses and technologists agreed that the Adopt-A-Unit has improved communication. The improvement in communication is most certainly limited to the persons who use the communication network. Improvements included in comments made in response to the question were: more openness and friendliness, greater appreciation of each others' functions in the hospital, and more personal attention. Regarding problem solving, comments indicated that questions are answered more easily, faster, and with just one phone call which saves time for the nurse.

Supporting the conclusion that communication has improved was a high number of "yes" responses from both nursing and laboratory personnel on two questions regarding a change in attitude toward each other. Comments accompanying the responses indicated that the change was positive.

Although the conclusion can be made that the communication network is used, a majority of "no" responses by both nurses and technologists indicated that there is no regularity in the communication. A higher number of "yes" than "no" responses indicated that technologists felt more comfortable calling their contact since the implementation of the

Adopt-A-Unit. Responses were divided between "yes" and "no" from the nurses about this question. Conclusions can be made from the comments accompanying the responses. Many of the nurses responded "no" because they had no contact from laboratory personnel involved with the network or they did not use the network.

As a result of this network, problems have been solved for nurses by medical technologists. Supporting this conclusion is the high number of "yes" responses from the technologists about the problems solved for their nursing contact. Many specific problems or concerns were listed by the technologists. There were many "no" responses from nurses about problems solved in their areas. Comments accompanying the responses indicated the nurses who responded to the questionnaire did not have problems for the laboratory contact to solve or they did not use the contact to solve them. Some nurses who responded "yes" to this question listed problems that had been resolved as a result of this network. No conclusions can be made from the responses to the question about receiving feedback to problems discussed between contacts in nursing units and the laboratory. There was no definite pattern in the responses from either the nurses or the medical technologists.

Unfortunately, questions 12 and 13 on the laboratory questionnaire were misinterpreted by several respondents. These questions asked if morale and communication in the laboratory had improved as a result of this network. No conclusions can be drawn from the responses as a result of the misinterpretation.

From the responses to the question about continuing the program, the conclusion can be made to continue it because of a majority of "yes" responses from both nurses and medical technologists. There were a few

suggestions made for ways to improve the program. These suggestions are listed in the findings.

In answer to the questions asked in the purpose of the study, "Yes, the Adopt-A-Unit communication network that was established between laboratory and nursing personnel has been used" and "Yes, communication between the two departments improved as a result of the network."

Conclusions can be summarized as follows:

1. There was no relationship identified between length of employment and frequency of communication.

2. There was no relationship identified between frequency of communication before or after implementation of the communication network.

3. Some nursing units did not use the communication network because they did not use laboratory services very much.

4. The communication network was used by those nurses who wished to use it.

5. Some nurses had not been contacted at all or only once by the laboratory volunteer.

6. The communication network has improved communication between the departments, especially for the persons who use it more frequently.

7. There was no regularity in the pattern of communication established between the contact persons.

8. Medical technologists have solved problems for their nursing units.

9. The majority of nurses and medical technologists believed the program should be continued.

As indicated by comments accompanying the responses to the

questionnaire, several benefits of the communication network have been identified:

1. Communication became more open between the departments.

2. Answers to questions from the nurses were obtained quickly and more easily than before.

3. Nurses felt reassured because someone in the laboratory was taking responsibility for answering questions and solving problems.

4. Making one phone call to a contact person has resulted in saving time for the nursing unit.

5. There was a better understanding of each others' problems and roles.

6. Problems were solved.

7. Medical technologists felt more like members of the health care team.

8. There has been more cooperation between the two departments.

Recommendations

From the results of this study, several recommendations can be made. The main recommendation is to continue the program because the study found that the communication network was being used and it had improved communication. The network has support from both nursing and laboratory personnel.

Another recommendation is to use suggestions and comments from the respondents to the questionnaire to improve the network. These are included in the chapter with the findings. Specific suggestions mentioned were: a structured time frame for the laboratory person to contact the nurses, more contact from the laboratory person, and one

respondent asked for a different person to contact them because they had not been contacted. Other suggestions included more inservices for the nurses, keep nursing units up-to-date on changes in the laboratory, an open house reception for the contact persons, having a set time to meet with the nurse, and give tours of the laboratory. Results and recommendations will be presented to the questionnaire respondents. They will be asked for approval to implement some of the suggestions.

The author recommends reducing the number of medical technologist volunteers to four or five people who believe in the program and are willing to spend time to improve it. These technologists should be willing to learn more about all sections of the laboratory in order to communicate effectively with the nurses. Supervisor permission would need to be obtained for these technologists to spend the time required on communication to the nurses and in problem solving. Cooperation would be required of all laboratory personnel in order to solve problems identified by the nursing units. All patient care supervisors and other personnel on the units would be given the names of these technologists instead of pairing one nurse with one technologist. At least one person would be available at all times, including the evening shift. As identified by this study, some nursing units use laboratory services more frequently than others. The four or five technologists would not need to contact the units that do not need the communication as much as others. The names would be available to all in the event of a need to contact someone in the laboratory. The technologists would be responsible for communicating changes in policies or procedures to all nursing units.

The study also suggests the need for future research about the use of the network in improving communication and in problem solving, especially after suggestions from the author or program participants have been implemented.

A recommendation is also made for further research in the area of inter-departmental hospital communication. Areas for further research include communication between nursing and laboratory personnel and nursing and personnel in other hospital departments, as well as communication between physicians and medical technologists. There is a lack of such research as indicated from the review of literature.

A SELECTED BIBLIOGRAPHY

Goldhaber, Gerald M. Organizational Communication. Third Edition. Iowa: Wm. C. Brown Company Publishers, 1983.

Hage, Jerald. Communication and Organizational Control: Cybernetics in Health and Welfare Settings. New York, NY: John Wiley and Sons, 1974.

Hite, Roger W. and Sally A. Hite. "Recent Doctoral Research in Hospital Organizational Communication: A Critique." (Unpublished paper presented at Annual Meeting of the Western Speech Communication Association, Phoenix, Arizona, November, 1977.)

Meyer, Donna M., Kathryn Ellerman, and Joan McNeely. "Using Medical Technologists in a Patient Liaison Program," Medical Laboratory Observer, Vol. 3, No. 10 (October, 1986), pp. 522-524.

Pace, R. Wayne. Organizational Communication: Foundations for Human Resource Development. New Jersey, NJ: Prentice-Hall, Inc., 1983.

Record, Florence, R. N. "A Broker for Better Nursing-Laboratory Relations." Medical Laboratory Observer (August, 1983), pp. 80-86.

APPENDIX A

QUESTIONNAIRE DISTRIBUTED TO NURSING PERSONNEL

Opinion Survey of the "Adopt-A-Unit" program:

Please circle your response. Use the back of the page for additional writing space if needed.

1. How many years have you worked at Saint Francis?

   0-5 6-10 11-15 16-20 over 20

2. Before the Adopt-A-Unit program was implemented, how frequently did you communicate with laboratory personnel about the following:

   a. calling for results

   not at all seldom monthly weekly more than once a week

   b. asking or answering questions

   not at all seldom monthly weekly more than once a week

   c. problem solving

   not at all seldom monthly weekly more than once a week

3. Before the Adopt-A-Unit program was implemented, did you ask for a person by name or ask for a department?

   name department neither-I talk to whomever answers

4. Since the implementation of the "Adopt-A-Unit" program, do you call your laboratory contact person when you have a question or a problem?

   yes no

   If no, why not?

5. Since the implementation of the "Adopt-A-Unit" program, has there been an improvement in communication between the two departments?

   yes If yes, how?

   no If no, why not?

6. Since the implementation of "Adopt-A-Unit", have there been any changes in the attitude of lab personnel toward nursing personnel?

   yes If yes, how?

   no If no, why not?

7. Since the implementation of "Adopt-A-Unit", have there been any changes in the attitude of nursing personnel toward lab personnel?

   yes If yes, how?

   no If no, why not?

8. Does your Adopt-A-Unit laboratory contact communicate with you regularly?

   yes no How often?

9. Since the implementation of Adopt-A-Unit, do you feel more comfortable calling the laboratory for your contact person?

   yes no

   If no, why not?

10. Have any problems been resolved in your area as a result of this program?

    yes (briefly describe problems)

    no If no, why not?

11. Do you receive feedback from your contact person in the laboratory concerning the problems you have discussed?

    yes no

12. Do you feel that this program is worth continuing?

    yes If yes, what improvements can you suggest?

    no If no, why not

Additional comments or ways to improve the program:

APPENDIX B

QUESTIONNAIRE DISTRIBUTED TO LABORATORY PERSONNEL

Opinion Survey of the "Adopt-A-Unit" program:

Please circle your response. Use the back of the page for additonal writing space if needed.

1. How many years have you worked at Saint Francis?

   0-5 6-10 11-15 16-20 over 20

2. Before the Adopt-A-Unit program was implemented, how frequently did you communicate with nursing personnel about the following:
   a. calling results

   not at all seldom monthly weekly more than once a week

   b. asking or answering questions

   not at all seldom monthly weekly more than once a week

   c. problem solving

   not at all seldom monthly weekly more than once a week

3. Since the implementation of the Adopt-A-Unit program, how frequently do you communicate with nursing personnel about the following:
   a. calling results

   not at all seldom monthly weekly more than once a week

   b. asking or answering questions

   not at all seldom monthly weekly more than once a week

   c. problem solving

   not at all seldom monthly weekly more than once a week

4. Since the implementation of the Adopt-A-Unit program, does your nursing unit contact you when they have a question or a problem?

   yes no

   If no, why not?

5. Since the implementation of the Adopt-A-Unit program, has there been an improvement in communication between the two departments?

   yes If yes, how?

   no If no, why not?

6. Since the implementation of Adopt-A-Unit, have there been any changes in the attitude of lab personnel toward nursing personnel?

   yes If yes, how?

   no If no, why not?

7. Since the implementation of Adopt-A-Unit, have there been any changes in the attitude of nursing personnel toward lab personnel?

   yes If yes, how?

   no If no, why not?

8. Does your Adopt-A-Unit nursing unit communicate with you regularly?

   yes no How often?

9. Since the implementation of Adopt-A-Unit, do you feel more comfortable calling the nursing unit for your contact person?

   yes no

   If no, why not?

10. Have you been able to resolve any problems for your Adopt-A-Unit?

    yes (briefly describe problems)

    no If no, why not?

11. Do you receive feedback from your contact person on the nursing unit concerning the problems you have discussed?

    yes no

12. Has the Adopt-A-Unit program affected morale in the laboratory?

    yes If yes, has the effect been good or bad?

    no If no, why not?

13. Has the Adopt-A-Unit program affected communication in the laboratory?

    yes If yes, how?

    no If no, why not?

14. Do you feel that this program is worth continuing?

    yes If yes, what improvements can you suggest?

    no If no, why not?

Additional comments or ways to improve the program:

VITA

Mary L. Watts

Candidate for the Degree of

Master of Science

Thesis: AN EVALUATION OF A MODEL OF AN INTERDEPARTMENTAL COMMUNICATION NETWORK BETWEEN LABORATORY AND NURSING PERSONNEL IN A LARGE HOSPITAL

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Tulsa, Oklahoma, October 10, 1945, the daughter of Ivo R. and Lucille A. Greenwell. Married to Dale K. Watts; four children, Jason Dale, Monica Lynn, Melody LeeAnn, Matthew David.

Education: Graduated from Broken Arrow High School, Broken Arrow Oklahoma, in May, 1963; received Bachelor of Science in Biology from Northeastern Oklahoma State University, Tahlequah, Oklahoma, in May 1967; completed internship in the school of Medical Technology at St. John's Hospital in Tulsa, Oklahoma, in July 1968; completed requirements for the Master of Science degree at Oklahoma State University in May, 1987.

Professional Experience: Medical technologist in the laboratory at Saint Francis Hospital, Tulsa, Oklahoma, from August of 1968 to present.

Professional Organizations: American Society for Medical Technology, Tulsa County Society for Medical Technology, American Society for Training and Development, National Management Association, American Association for Adult and Continuing Education.