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A Study of the Use of Clinician I Personnel to Perform Intravenous Therapy

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**A
STUDY
OF THE USE
CLINICIAN I PERSONNEL
TO PERFORM INTRAVENOUS THERAPY**

**A Research Paper
Presented to the Graduate Faculty
of the Department of Occupational and Technical Studies
at Old Dominion University**

**In Partial Fulfillment
Of the Requirements for the Degree
Master of Science in Education**

**by
Laura L. Walker
August 1996**

APPROVAL PAGE

This research paper was prepared under the direction of Dr. John M. Ritz, Graduate Advisor. It was submitted to the Graduate Program Director of Occupational and Technical Studies as partial fulfillment of the requirements for the Degree of Master of Science in Education.

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Laura L. Walker

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CHAPTER I

INTRODUCTION

As society approaches the 21st century, the American public is witnessing what is perhaps the largest crisis in the United States health care system. Health care reform and managed care have become the “buzz” words of the nineties. With ever increasing health care costs, an increasing amount of uninsured Americans, a rapidly aging population, the prolonging of life through the latest technologies and new epidemic proportion diseases and problems (such as HIV, tuberculosis, and drug abuse), the need seems to be apparent for a restructuring of the delivery of health care services in the United States. This paper focuses on one area of the restructuring of health care services, the use of unlicensed assistive personnel to perform patient care tasks that were previously only performed by licensed registered nurses. Specifically, this paper focuses on one institution, Children’s Hospital of the King’s Daughters, located in Norfolk, Virginia, and its use of unlicensed assistive personnel.

STATEMENT OF THE PROBLEM

The problem of this study was to determine if Clinician I personnel at Children’s Hospital of the King’s Daughters in Norfolk, Virginia, could be trained to perform intravenous therapy and phlebotomy skills at the same level of

proficiency as licensed registered nurses.

RESEARCH GOALS

The purpose of this study was:

1. To determine if Clinician I personnel can obtain the same proficiency level at intravenous therapy as their licensed counterparts, registered nurses.
2. To determine if Clinician I personnel can obtain the same proficiency level at phlebotomy skills as their licensed counterparts, registered nurses.

BACKGROUND AND SIGNIFICANCE

In order to meet the demands for delivery of more services for less financial outlay, hospital administrative personnel have restructured the way that their staffs deliver care to patients. In many instances, this restructuring focuses on using personnel other than registered nurses (RNs) to deliver patient care. The integration of patient care services among people with different knowledge, skill levels and capabilities is having a great impact of hospital based systems across the United States. Staff composition in many hospitals today is composed of a mixture of registered nurses, licensed practical nurses (LPNs), and unlicensed

assistive personnel (UAPs).

The American Nurses Association (ANA) provides the following broad definition of unlicensed personnel:

“Unlicensed assistive personnel are individuals who are trained to function in an assistive role to the registered professional nurse in the provision of patient/client care activities as delegated by and under the supervision of the registered professional nurse.”

(American Nurses Association, Registered Professional Nurses and Unlicensed Assistive Personnel, p. 2)

In the past, assistive nursing personnel were collectively referred to as “nurse’s aides”. This group of individuals had clear definitions set as to what job responsibilities that they had, what education that they needed and what their role limitations were. (ANA, 1994, p. 3) With today’s new collection of titles, roles and expectations of unlicensed assistive personnel, there is much confusion and concern as to the proper utilization and education of unlicensed assistive personnel.

At Children’s Hospital of the King’s Daughters in Norfolk, Virginia, staff roles and responsibilities were altered in an effort to keep up with the demands of the health care systems of the nineties. The new delivery system was named “Building Excellence”. Under this program, registered nurses were given the responsibility and made accountable for the nursing practice as well as the responsibility for the supervision and appropriate utilization of any unlicensed personnel. Registered nurses were given the title, “Patient Care Coordinators”.

Depending on the particular unit in the hospital, unlicensed assistive personnel were given the following titles, “Clinician I”, “Clinician II”, and “Critical Care Aide”. The individuals that comprised this group of unlicensed assistive personnel included practical nurses, emergency medical technicians, nursing aides and paramedics.

As part of the Building Excellence model, all personnel were trained in their new roles. Unlicensed assistive personnel (UAP) received training in a variety of subjects related to patient care needs. One of these areas was in providing intravenous therapy and phlebotomy skills to patients. In the past, this area had been primarily limited to registered nurses, transport paramedics and laboratory personnel. In broadening the scope of practice of the UAP, less registered nurses would be needed across the hospital and the registered nurses would have more time for coordination of patient care activities.

There is very little printed information about the use of unlicensed assistive personnel for venipuncture (intravenous and phlebotomy skills). In a study conducted at Texas Children’s Hospital in Houston, Texas, nurses identified a need to add to staff numbers, individuals qualified to perform venipunctures. It was believed that by increasing the number of staff available to perform intravenous therapy and phlebotomy, time would be saved. (Grimland-Batson, 1993, p. 411) A pilot program, conducted at Texas Children’s Hospital, trained licenced vocational nurses to perform venipunctures. The main emphasis of this pilot was to adapt the role of the licensed vocational nurse to that of an assistant to

the registered nurse, however no mention was made of the quality of the success of the program. (Grimland-Batson, 1993, p. 412)

LIMITATIONS OF THE STUDY

This study was limited to the Children's Hospital of the King's Daughter's located in Norfolk, Virginia. The unit of nursing that was studied was the Progressive Care Unit (PCU).

BASIC ASSUMPTIONS

There are a variety of conditions that need to be taken into consideration when performing intravenous therapy and phlebotomy skills. These conditions are taken into consideration during training programs and should show no appreciable impact on an individual's ability to perform the procedure. Training is an important element whenever anyone is expected to learn a new skill. Individuals need to be accurately trained and given ample opportunities to practice newly learned skills before being expected to perform these skills at a proficient level.

PROCEDURES

Data for this study was collected from the Progressive Care Unit (PCU) in Children's Hospital of the King's Daughters. Specific information concerning training given to personnel was gathered from the hospital education department and unit based educators. A data gathering form was developed to track the proficiency level of personnel performing intravenous therapy and phlebotomy skills.

DEFINITION OF TERMS

There are several terms used in this study which may be unfamiliar to the reader. These terms are as follows:

1. **CHKD-** Children's Hospital of the King's Daughters.
2. **Unlicensed assistive personnel-** "...individuals who are trained to function in an assistive role to the registered professional nurse in the provision of patient/client care activities as delegated by and under the supervision of the registered professional nurse". (ANA, 1994, p. 2)
3. **Intravenous-** within a vein.
4. **Phlebotomy-** the therapeutic practice of opening a vein to draw blood.

OVERVIEW OF CHAPTERS

This chapter identifies the need for determining if Clinician I personnel can be trained to perform intravenous therapy and phlebotomy skills at the same level of proficiency as registered nurses at Children's Hospital of the King's Daughters, Norfolk, Virginia. Chapter II will establish the need for the use of unlicensed assistive personnel, such as Clinician I personnel in the delivery of patient care. This section will be entitled "Review of Literature". Chapter III will be entitled "Methods and Procedures". Its purpose will be to outline the procedures for obtaining data. Chapter IV will be centered around documenting the results of the findings. This chapter will be entitled "Findings". Chapter V, entitled "Summary, Conclusions, and Recommendations", will be used to summarize the research findings. In this section the research will also convey the conclusions of the research and provide recommendations for program improvement.

CHAPTER II

REVIEW OF LITERATURE

The goal of this study was to determine if unlicensed assistive personnel, in the health care services, could obtain the same proficiency level at intravenous therapy and phlebotomy skills as could their licensed counterparts, registered nurses. In addition, the need was also identified to investigate any variables that might influence the overall proficiency level of unlicensed assistive personnel in performing these skills (such as training, work environment and attitudes of co-workers).

THE VALUE OF USING ASSISTIVE PERSONNEL IN HEALTH CARE

The efficient delivery of nursing services is a fundamental element of today's health care system. With an ever growing aging population and an increase in chronic and terminal illnesses, safe, affordable and accessible nursing care services are essential. In the past, nursing care services were limited to select places, such as hospitals and nursing homes. As health care reforms and managed health care evolves, hospital services will progressively change from in-patient services to out-patient services. Employment opportunities for nurses will continue to grow in areas such as schools, insurance companies, health

maintenance organizations and community health services. (Crawley, 1993, p. 48)

In order to respond to the ever changing needs of health care, hospital executives and nurse managers will need to develop and utilize delivery care models that are flexible, innovative, improve work efficiency, and provide high quality patient care. (Gardner, 1991, p. 40) Incorporating unlicensed assistive personnel into the health care team in an effort to provide support to registered nursing staffs will provide a strong patient care team that will assure the delivery of safe and effective nursing care. (ANA, 1994, p. v) The Secretary's Commission on Nursing supports the use of unlicensed assistive personnel in order to provide nurses more time to deliver services to patients and families. (Secretary's Commission on Nursing, 1988) In addition, the Joint Commission on Accreditation of Health Care Organizations (JCAHO) supports the use of assistive personnel by stating, "If nursing staff members have insufficient time to provide nursing care to patients because of other assigned non-nursing duties (such as housekeeping, drug or material transport, clerical functions) or because of assuming other functions "after hours" (such as providing respiratory care services, or drawing blood samples on the night shift), the hospital needs to examine the sufficiency of its patient care support services and take appropriate action". (Accreditation Manual for Hospitals, 1992, pp. 42-43)

GUIDELINES FOR THE UTILIZATION OF ASSISTIVE PERSONNEL

The use of unlicensed assistive personnel has increasingly grown in the past ten years. During the early 1980's, in response to the rising acuity level of patients and new medical technologies, there was an increase in the use of registered nurses. However, in the past ten years, changes in economics, health care delivery systems and patient populations have tilted the scales in favor of using more assistive personnel and less registered nurses. In the past, the role of the "nurse's aide" had clearly defined requirements for education, training, job content and role limitations. (ANA, 1994, p. 3) Today, there are a variety of titles, roles and limitations that apply to unlicensed assistive personnel. This tends to bring a lot of concern on the part of registered nurses and health care managers about how assistive personnel will be utilized.

It is imperative to the success of today's health care systems that a clear definition of the unlicensed staff member's role is provided and is understood. The absence of a clear definition will lead to role ambiguity and a lack of consensus of the expectations of the roles of unlicensed assistive staff. Role ambiguity of assistive staff may lead to low morale and poor job performance of all health care personnel. (Crawley, 1993, p. 49)

In order for the use of assistive personnel to succeed, all health care workers involved must participate willingly. Initially, many registered nurses resist the utilization of assistive personnel. Concerns vary, but the most often voiced

concerns regard legal aspects of supervision, division of role functions and duties and the registered nurse's ability or willingness to delegate. (Lewis, 1993, p. 94) Most of the controversy among nurses regarding the use of assistive personnel has been related to task delegation.

According to many sources, delegation is essential to the relationship between the registered nurse and the unlicensed assistive staff member. The American Nurses Association (ANA) defines delegation as "the transfer of responsibility for the performance of an activity from one individual to another, with the former retaining accountability for the outcome". (ANA, 1994, p. 11) In determining appropriate utilization of assistive staff, the nurse should consider the capabilities of the assistive staff member, the complexity of the nursing task and the amount of supervision that the registered nurse will be able to provide. (ANA, 1994, p. 12) It is important to keep in mind that the utilization of assistive personnel should be a dynamic process (not static) and should be adjusted according to the needs of the patients, staff and facility.

ISSUES REGARDING THE UTILIZATION OF ASSISTIVE PERSONNEL

There are many issues that relate to the utilization of unlicensed assistive personnel. With the diversity of the types of nurse extender programs, there tends to be a great deal of confusion about how to utilize these types of personnel. Many ask what are unlicensed assistive personnel or nurse extenders and what is

the purpose of having them in the institution? These questions bring forward many professional issues. These include issues of minimum RN staffing, division of role functions, willingness of RNs to delegate; economic issues of administrative control and relative cost or benefit; and the labor relation issues such as whether this will figure into labor negotiations where nurses take part in contract issues. (Gardner, 1991, p. 43) An additional issue that arises is nursing's desire for an all-RN staff. The addition of nurse extenders/assistive personnel to staffing tends to elicit strong reactions from all RN staffs. Nurses tend to have the natural tendency to be more comfortable with the "way it has always been done" and balk at the addition of assistive personnel. Many nurses feel threatened by the new staff and feel that the new staffs place added responsibility on them, instead of being a help. In addition, some nurses do not know how to delegate and follow up on tasks. From an economic standpoint, the issues arise as to what structure will best accomplish the delivery of quality patient care and what will be the cost to the nursing department and the organization. Questions arise such as who does what? Who pays for what? Should there be one form of assistive personnel for the whole organization or can there be multiple types? Should this type of staff be unit based or centralized? There also arises the question of control. Is administration in control or is nursing?

Another economic issue is the liability associated with assistive staff. Several sources discuss the liability issue. Arguments can be presented that licensing nurse extenders will decrease any potential liability and decrease the

potential for errors, because presumably if staff is licensed they need a greater degree of training. The counter argument to this is that it is less costly to hire unlicensed staff because their salaries are lower and they may be less attractive parties in any potential lawsuit. (Gardner, 1991, p. 44) A consensus of the literature surveyed is that individual institutions need to address all of these issues as part of their internal decision making on how the utilization of unlicensed personnel affects their institution.

USE OF UNLICENSED ASSISTIVE STAFF

Unlicensed assistive staff can provide critical support to nursing staffs and make a significant contribution to the delivery of efficient patient care. There is considerable debate over what role the unlicensed assistive staff member can and should fill. Key issues that arise include role clarity and integration with nursing staff (to include delegation). (Crawley, 1993, p. 47) There are many models depicted in the literature that show a variety of uses for and tasks of unlicensed assistive personnel. Generally, regardless of model type, there are two categories of unlicensed assistive staff: the patient care assistant and the unit assistant. The patient care assistant is usually supervised by a registered nurse and is assigned aspects of patient care. The unit assistant supports the nursing system by performing non-nursing tasks. This individual may be supervised by nursing staff or non-nursing staff. (Crawley, 1993, p. 47) A third type of unlicensed assistive

personnel has also been identified and is referred to as the multipurpose worker or “hybrid” nurse extender. This type of individual may be a housekeeper, who once undergoing training, may be responsible not only for housekeeping tasks, but for performing EKGs, venipunctures, and transporting patients. (Gardner, 1991, p.44)

The tasks that can be delegated to unlicensed assistive personnel tend to vary from one model to another and from one institution to another. Depending on the source and the model, different views may be found as to what tasks unlicensed personnel can do. Very few references are made to the use of unlicensed personnel to perform venipuncture (intravenous therapy and phlebotomy), however Grimland-Batson refers to a program conducted at Texas Children’s Hospital which trained licensed vocational nurses in venipuncture skills. (Grimland-Batson, 1993, p. 401) While articles referring to unlicensed personnel are plentiful, the delineation of tasks and roles have been less frequently reported. In a survey conducted in 1992 by Blegen et al., nurses were asked to describe who helped them in performing their jobs. The assistance that these nurses cited included: direct care of varied complexity, admission and discharge, special and medical procedures, clerical, intravenous and monitoring care, diagnostic tests, and care of patients requiring isolation. (Chang, 1995, p. 65) The following table, Table 1, depicts some of the most frequently delegated tasks that assistive personnel perform. (Crawley, 1993, p.49)

Table 1

Tasks Most Frequently Delegated By Registered Nurses
to Assistive Staff Members

<p>BASIC CARE: AM/PM Care Monitor Body Care Mechanics and Skin Integrity</p> <p>MEASUREMENTS: Vital Signs Height and Weight Intake and Output</p> <p>NUTRITION: Assistance with Meals, Snacks, and Supplemental Feedings Tube Feedings (by gravity)</p> <p>ELIMINATION: Catheter Care Enemas</p>	<p>RESPIRATORY CARE: Suctioning Tracheal Care Application of Oxygen Delivery (Nasal Cannula/Mask)</p> <p>SPECIMEN COLLECTION: Stool Sputum Gastric</p> <p>DOCUMENTATION: Uses Flow Sheets</p>
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Adapted from the "Medical College of Georgia
Hospital and Clinics Career Nursing Assistant Skills Checklist"

SUMMARY

The chances of successful implementation of unlicensed assistive personnel in health care can be greatly improved by clearly defining the role of the nurse extender / assistive staff member, their purpose for nursing, whether they will be a cost-effective solution to the institution's needs and what structure will best utilize this type of staffing. When used successfully, it has been shown that unlicensed assistive staff have enabled registered nurses to increase the amount of time spent with patients and decrease the amount of time spent in task-oriented activities that may not require a registered nurse's training and/or competency. One task oriented activity that nurse extenders can assist registered nurses with is intravenous therapy and phlebotomy skills. With adequate training and mentoring, unlicensed assistive personnel can adequately perform these skills. (Grimland-Batson, 1993, p. 412)

CHAPTER III

METHODS AND PROCEDURES

The purpose for this chapter is to identify the methods used to determine if Clinician I personnel at Children's Hospital of the King's Daughters in Norfolk, Virginia, could be trained to perform intravenous therapy and phlebotomy skills at the same level of proficiency as licensed registered nurses. A descriptive study (correlational study) was conducted utilizing data collected over a six month period of time. This chapter outlines the methods and procedures used to facilitate the completion of this study.

POPULATION

The population in this study consisted of personnel employed by Children's Hospital of the Kings Daughter's Progressive Care Unit (PCU). There are a total of sixty-four people employed in this unit. There are forty-five registered nurses and nineteen Clinician I's (unlicensed staff) and one support associate.

INSTRUMENT DESIGN

In an effort to determine if Clinician I personnel at CHKD in Norfolk,

Virginia, could be trained to perform intravenous therapy and phlebotomy skills at the same level of proficiency as licensed registered nurses, a data gathering form was designed to collect information. (Appendix A) This form collected the following information: IV starts and/or phlebotomy attempts, number of attempts of both skills, numbers of success or failure, patient age, diagnosis and initials and skill level of person attempting the skill. The data gathering forms were filled out by the Progressive Care Unit staff daily. Data was collected for a six month period from December 1995 to May 1996.

METHODS OF DATA COLLECTION

The data gathering form designed to collect information regarding intravenous therapy success rates was made available to staff members in the unit under study. Staff were asked to record all intravenous and phlebotomy attempts performed in the Progressive Care Unit over a six month period of time (December 1995-May 1996). All data collected was placed in a spreadsheet format on computer.

METHODS OF STATISTICAL ANALYSIS

The data collected from the data gathering form was nominal data and

therefore, Chi Square was the statistical method used for correlating the data. The data collected were divided into pairs for correlation. The number of successes of intravenous therapy by registered nurses was compared to the number of successes of intravenous therapy by Clinician I personnel. The same correlational study was done in regards to successes of phlebotomy skills.

SUMMARY

This chapter focused on the design and administration of the instrument. The results of the data collected over a six month period of time were analyzed to determine if Clinician I personnel could attain the same proficiency level at intravenous therapy and phlebotomy skills as could registered nurses in the same setting.

CHAPTER IV

FINDINGS

Chapter IV of the study contains the statistical results of the correlational study that was conducted at Children's Hospital of the King's Daughters in order to determine if Clinician I personnel could be trained to perform intravenous therapy and phlebotomy skills at the same level of proficiency as licensed registered nurses. This study was conducted utilizing data collected over a six month period of time (December 1995-May 1996). The population in this study consisted of personnel employed by Children's Hospital of the King's Daughter Progressive Care Unit (PCU). A total of sixty-four people are employed in this unit, forty-five registered nurses and nineteen Clinician I's.

RESULTS OF DATA

As indicated in Tables 2 and 3, data was collected over a six month period of time to determine how many attempts at intravenous therapy were made and how many successes and failures each group had during this period of time. Data was also collected during the same time frame to determine how many attempts at phlebotomy were made and how many successes and failures each group had during this period of time (as indicated in Tables 4 and 5). Each set of data was averaged to determine the "success rate" for each group. Clinician I's had a thirty-

six (36) percent success rate for intravenous therapy and a fifty-five (55) percent success rate for phlebotomy. Registered nurses had a thirty-four (34) percent success rate for intravenous therapy and a fifty-nine (59) percent success rate for phlebotomy.

TABLE 2
CLINICIAN I INTRAVENOUS STARTS (DEC 95-MAY 96)

	TOTAL IVS	#IV ATTEMPTS	SUCCESSSES	FAILS
DEC	14	19	5	9
JAN	16	32	9	7
FEB	12	16	7	5
MAR	16	31	9	7
APR	10	13	6	4
MAY	6	7	6	0
TOTALS	74	118	42	32

*Note: #IV attempts refers to the number of attempts it took personnel to succeed in establishing an IV. For example, in December 1995, it took 19 “tries” or attempts to establish 14 IVs.

TABLE 3**REGISTERED NURSE INTRAVENOUS STARTS (DEC 95-MAY 96)**

	TOTAL IVS	#IV ATTEMPTS	SUCCESSSES	FAILS
DEC	35	70	20	15
JAN	21	26	16	5
FEB	28	51	18	10
MAR	27	49	15	12
APR	11	31	9	2
MAY	4	11	2	2
TOTAL	126	238	80	46

TABLE 4**CLINICIAN I PHLEBOTOMY (LAB) STARTS (DEC 95-MAY 96)**

	TOTAL LABS	#LAB ATTEMPTS	SUCCESSSES	FAILS
DEC	41	66	23	18
JAN	55	80	47	8
FEB	79	110	65	14
MAR	78	118	58	20
APR	38	37	33	5
MAY	12	13	9	3
TOTALS	303	425	235	68

TABLE 5
REGISTERED NURSE PHLEBOTOMY (LAB) STARTS
(DEC 95-MAY 96)

	TOTAL LABS	# LAB ATTEMPTS	SUCCESSSES	FAILS
DEC	27	49	21	6
JAN	26	26	25	1
FEB	44	58	29	15
MAR	56	67	45	11
APR	16	23	16	0
MAY	13	23	8	5
TOTALS	182	246	144	38

For each set of data (intravenous therapy and phlebotomy) an hypothesis was established and the data was tested for independence using the Chi Square probability distribution. The hypothesis for the intravenous therapy group was as follows:

Intravenous Therapy Group Hypothesis:

H_0 : Clinician I's can be as successful at Intravenous Therapy
as Registered Nurses.

When using the Chi Square distribution to test the above hypotheses, the following data was obtained. The total sample size (N) was equal to 322, the level of significance, Alpha used was equal to .01, the sample Chi Square value was

equal to .217801 and the p-value was equal to .6407206. Since the level of significance equal to .01 was less than the p-value of .6407206, the null hypothesis was accepted for this grouping of variables.

The hypothesis for the phlebotomy group was as follows:

Phlebotomy Group Hypothesis:

H₀: Clinician I's can be as successful at Phlebotomy skills
as can Registered Nurses.

When using the Chi Square distribution to test the above hypotheses, the following data was obtained. The total sample size (N) was equal to 864, the level of significance, Alpha used was equal to .01, the sample Chi Square value was equal to 1.991331E-02 and the p-value was equal to .8877795. Since the level of significance equal to .01 was less than the p-value of .8877795, the null hypothesis was accepted for this grouping of variables.

SUMMARY

This chapter reported and analyzed the results of the correlational study of data collected that reflected intravenous therapy and phlebotomy attempts and success rates for Clinician I personnel and registered nurses employed at Children's Hospital of the King's Daughters. Conclusions and recommendations will be made in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter reports the summary, conclusions and recommendations of this study as a result of the research data. The data reviewed and analyzed in Chapter IV will be used to draw conclusions in Chapter V.

SUMMARY

Chapter I identified the need for determining if unlicensed assistive personnel can be used effectively and with the same proficiency level to perform patient care tasks (such as intravenous therapy and phlebotomy skills) that were previously only performed by licensed registered nurses. Chapter II reviewed literature related to the use of unlicensed assistive personnel in health care settings as adjuncts to the practice of registered nurses. Findings reflect that successful implementation of unlicensed assistive personnel in health care can be greatly improved by clearly defining the role of the nurse extender/assistive staff member, and by providing adequate training and mentoring. Chapter III outlined the procedures for obtaining data through the use of a data gathering form that allowed staff to document skills performed during a six month period of time, December 1995 to May 1996. Data collected reported the attempts made at intravenous therapy and phlebotomy, the successes and failures at each of these

skills and whether or not the skill was performed by a registered nurse or a Clinician I. Chapter IV documented the results of the findings. Using the Chi square probability distribution, it was determined that Clinician I assistive personnel can be as successful as their registered nurse counterparts in intravenous therapy and phlebotomy skills.

CONCLUSIONS

Based on the findings, the following conclusions are made:

1. To determine if Clinician I personnel can obtain the same proficiency level at intravenous therapy as their licensed counterparts, registered nurses.
 - During the six month period that data was collected, Clinician I personnel had a 36% success rate and registered nurses had a 34% success rate at intravenous therapy. The null hypothesis, that Clinician I personnel can be as successful as registered nurses at intravenous therapy was accepted, using the Chi Square distribution.
2. To determine if Clinician I personnel can obtain the same proficiency level at phlebotomy skills as their licensed counterparts, registered nurses.

- During the period that data was collected, Clinician I personnel had a 55% success rate and registered nurses had a 59% success rate at phlebotomy skills. The null hypothesis, that Clinician I personnel can be as successful as registered nurses at phlebotomy skills was accepted, using the Chi Square distribution.

RECOMMENDATIONS

Predicated upon the results and conclusions of this study, the following recommendations can be made:

- The use of unlicensed assistive personnel, such as Clinician I's, in assistive roles to support registered nurses, is a successful practice and should be utilized more in managed health care systems. Care needs to be taken, however, to ensure that unlicensed assistive personnel receive adequate training and mentoring in those areas that they are expected to fill as assistants to registered nurses.
- The scope of this study was limited to a small unit in one children's hospital. In order to gain more validity, the scope should be broadened to more units in a variety of health care settings.

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APPENDIX A
DATA GATHERING FORM
IV STARTS/PHLEBOTOMY LOG

