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The selection and preparation of paramedic preceptors in emergency medical services

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THE SELECTION AND PREPARATION OF PARAMEDIC PRECEPTORS
IN EMERGENCY MEDICAL SERVICES

by

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Bachelor of Science
University of North Dakota
1986

Associate of Applied Science
Mankato State University
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A thesis submitted in partial fulfillment
of the requirements for the

Master of Science Degree
Department of Educational Leadership
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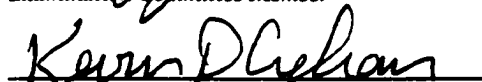
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ABSTRACT

The Selection and Preparation of Paramedic Preceptors in Emergency Medical Services

by

Brian J. Tilton

**Dr. Clifford McClain, Examination Committee Chair
Professor of Education
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Preceptorship is a phase of clinical training providing newly qualified professionals the opportunity to develop their knowledge and skills one-on-one with an experienced role model. Precepting lies on a continuum between teaching and mentoring. In Emergency Medical Services, training programs for paramedics, providers of Advanced Life Support emergency care, include a field internship where students are partnered with a preceptor for training and evaluation before program completion. The selection and preparation of these paramedic preceptors is critical in the development of the necessary skills and knowledge needed to perform competently in the various situations to which paramedics respond.

The purpose of this study was to determine if certain attributes could be used as predictors for preceptor success measured by a preceptor performance evaluation. The quantitative descriptive, correlation study was based on data gathered from paramedic preceptors in Clark County, Nevada in the spring of 1999. The sample (n = 66) was

drawn through a consensus survey of every paramedic preceptor employed by a provider agency in the Las Vegas valley.

Descriptive and inferential statistical techniques were used to treat the data. Pearson Product Moment correlation and hierarchical multiple regression analysis produced correlation coefficients among 16 preceptor attributes, constructed into four groups, and a preceptor performance evaluation completed by department training coordinators.

The findings of the study provided the basis for the conclusion that Instructor training was the key predictor in the scores of the paramedic preceptor performance evaluation. Certification as an Emergency Medical Services Instructor was the only single attribute to demonstrate a statistically significant regression correlation at the .001 level of significance. Training in other emergency medicine content specific instructor courses contributed to the overall predictive power but was not statistically significant in itself.

Other demographic attributes grouped under social, education, and clinical experience were not predictive of preceptor evaluation score at the .05 level of significance.

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CHAPTER I

INTRODUCTION

What Is Preceptorship? According to Morton-Cooper (1993), preceptorship is just one form of instructional relationship.

"The intention of a preceptorship is to provide newly qualified (or returning) professionals with three things: (1) Access to an experienced and competent role model. (2) A means by which to build a supportive one-to-one teaching and learning relationship, and (3) A smooth transition from learner to accountable practitioner" (p. 99).

Preceptorship, when well designed, enable practitioners to develop their knowledge and skills in a more comfortable atmosphere with an experienced role model and resource person who has been prepared for and understands the challenges confronting the beginning practitioner (Chickerella and Lutz, 1981; Morton-Cooper, 1993).

The word "precept" is derived from the Latin *praeceptum*, meaning order or authoritative command. A 'praeceptor' is described as a teacher, tutor, or instructor (Morton-Cooper, 1993). Precepting as a role falls on the continuum of instructional relationships. The generic term 'instruction' represents the relationship between a pair of individuals or an individual and a group, based on an essential inequality. For instruction, one person has something to teach that the other more junior person needs to learn.

Although rooted in unequal power, all parties to these relationships may achieve personal and/or professional growth (Barnum, 1997).

“Precepting, mentoring, and teaching are three different subsets of the instructional relationship. When considered on a continuum, precepting would be somewhere between teaching and mentoring” (Barnum, 1997, p 1).

Teaching is a relationship in which one individual conveys knowledge to another individual or group with the communication being primarily unidirectional, from teacher to student. Not all teaching takes place in the formal setting; often it can be incidental. The goal of teaching is learning and therefore structured around the content, any personal aspects are secondary. In traditional teaching environments there is little need for any personal relationship between teacher and students. The teacher may be distant to the students or friendlier with some than others. (Barnum, 1997).

Mentoring falls on the other end of the spectrum. Unlike teaching, which is usually a one-to-many scenario, mentoring takes place only in a one-to-one relationship. Two people voluntarily enter a relationship whereby the senior both instructs and guides the junior's career choices over a sustained period of time. What is conveyed in a mentoring relationship cannot be defined by a curriculum. Essentially, the mentor facilitates whatever the junior person requires to operate successfully through day-to-day events. This may involve knowledge, politics, philosophy, or even introductions to the right people. Mentoring relationships, unlike relationships between teacher-student and preceptor-intern, are never the result of an assignment, although they may develop from a teaching relationship. In contrast to teaching, mentoring is more about the person and less

about what is taught. The shift is from content to personal contact, from specifics to career development (Barnum, 1997).

Precepting lies between teaching and mentoring. Like mentoring, preceptorship is a one-to-one relationship sustained over time, although the time period is usually predetermined. While mentoring relationships form between two people naturally and gradually, preceptorships are generally contractual or informally arranged when an organization requires someone to be prepared for a job or role and someone else is assigned to demonstrate expected performance standards. The goals of a preceptorship are usually definite, though broad, and while it resembles the one-to-one relationship of a mentorship, the preceptorship is more comparable to teaching, regarding content. The learning goals are professional, not personal, but the preceptorship does retain a personal touch since evaluation and correction are commonly adjusted on an individual basis. The bottom line in any preceptorship is the apprentice is there to learn from the master (Barnum, 1997).

The Paramedic Preceptor

Many paramedic-training programs throughout the United States subscribe to a curriculum that encompasses three separate, increasingly advanced phases of education. These phases include didactic or classroom instruction; clinical or hospital instruction; and field or ambulance instruction. Through these phases, different aspects of training allow the student to gradually build essential knowledge and skills throughout the program of instruction.

Didactic sessions present the basic cognitive information and psychomotor skills necessary to become a paramedic. The clinical phase applies and refines those skills in the controlled environment of a hospital. Following successful demonstration of the ability to care for patients in the hospital setting, students move on to providing care in the prehospital environment.

The field-training phase, or internship, then offers students an opportunity to apply everything they have learned in the more realistic setting of actual emergency responses. To train for the advanced level of emergency medical care provided outside hospital doors, paramedic students participate in internships not unlike those utilized in other health-care profession education programs. Use of preceptorship as a clinical teaching method has slowly gained momentum in Emergency Medical Services (EMS) as well as in other medical professions. Preceptorship is being utilized to fill a gap prevalent in health care education between what is taught in the classroom and what is expected of graduates once they enter the workforce.

The core requirement of any successful internship program is a qualified preceptor (Giannini, 1991). When preceptors lack necessary attributes or are not prepared adequately, they will not be able to effectively precept an intern.

Statement of the Problem

The selection process for paramedic preceptors in Emergency Medical Services consists primarily of volunteerism, with occasional experience requirements. The absence of objective criteria and extensive formal training in the methods of adult learning and

student evaluation commonly results in performance discrepancies routinely encountered in preceptor programs and, regrettably, in students themselves.

This study was designed to identify those factors most highly correlated with successful preceptor selection in EMS and synthesize recommendations for training that would assure adequate preparation.

Research Questions

The following research questions provided the basis for the collection and analysis of the data:

1. What are the attributes of a successful paramedic preceptor?
2. What are the necessary components in the preparation of a paramedic preceptor?

Research Methodology Summary

This was a descriptive study in exploration of a dependable predictor model for successful paramedic preceptor candidates. A questionnaire was distributed to all certified paramedic preceptors in the Clark County Emergency Medical Services (EMS) System in and around the city of Las Vegas, Nevada. Preceptors were asked for details concerning several biographical factors categorized in five major areas including social background, education, teaching experience, training, and motivation.

Department training coordinators who train and monitor preceptors were then asked to complete a performance evaluation on each preceptor responding to the survey. Using

multiple regression analysis, a study of correlation was performed to identify factors predictive of a high score on the performance evaluation based on the survey responses.

Survey and evaluation instruments were reviewed for content evidence of validity internally by a group of expert preceptors and trainers and externally by professors in the Departments of Educational Leadership and Educational Psychology at the University of Nevada, Las Vegas.

The population for this study consisted of all recognized paramedic preceptors certified in Clark County, employed by five fire and rescue departments and one private ambulance service. The projected return rate was eighty percent for completion.

Significance of the Study

Health care is one of the most rapidly changing segments in our society today, presenting challenges especially to those in health-care profession education. The evolving nature of the health care system requires well-trained health care professionals with different skills, attitudes, and values.

Characteristic ways of professional thinking, acting, and feeling are expected from all participants, and these important lessons are taught and learned informally rather than in a lecture hall. Lessons are passed more effectively between preceptor and student during daily activities and interaction out in the real world where learning takes on a pragmatic character, one impossible to duplicate in the classroom.

In no other area is this concept more significant than in the prehospital medical environment. On the streets, paramedics are trained and certified to deliver the most advanced emergency care, once only available in hospitals, in the absence of direct

physician supervision. Doctors routinely rely on the senses and judgement of the paramedic to assess and determine the appropriate interventions that can be life saving for a patient.

Paramedics are persons who have special well-defined skills and knowledge in prehospital emergency medical care. They respond to calls for assistance of the widest variety. Not all are medical in nature. To deal with every situation, one needs more than just medical knowledge. Acceptance, equanimity, and an extensive range of administrative and interpersonal skills are necessary but difficult or impossible to adequately impart upon students in a classroom.

Preceptorship is a unique opportunity for a novice to closely observe an experienced EMS professional in the performance of his or her daily duties. In EMS, these duties often include responding to and caring for individuals seriously injured or ill. Victims depend on the timely decisions and abilities of emergency medical responders to prevent any further decompensation and, possibly, save their lives.

Students are encouraged to examine closely, with a preceptor's help, what determines an effective emergency care provider both interpersonally and in terms of clinical expertise. The disastrous effect of delegating the indoctrination of a new and vulnerable participant in EMS to an ill-qualified or poorly prepared preceptor is almost incomprehensible and intuitively a subject of nightmares.

Preceptorship is carried out on a day-to-day basis throughout the emergency services' profession, with many anecdotal success stories. Preceptors with minimal formal training and guidance beyond personal experiences lead young, inexperienced but eager students through expected performance requirements, often without defined objectives. The goal

is simply to accomplish whatever task befalls them as safely and efficiently as possible. Experiences range from dismal to incredibly successful, varying not only between preceptors, but also between students of a single preceptor.

In positive circumstances, evidence supports the concept that preceptorship works. Tangible rewards become visible in terms of better employee retention, higher morale, and an increased sense of purpose and mission in improving the quality of care provided to patients (Morton-Cooper, 1993). Preceptorship is, after all, the very beginning stage of a future professional practice and sets the tone for future professional relationships.

When preceptors are not carefully selected and prepared, problems often arise. The thorny issue of who should decide when a student is ready to assume the responsibility of primary practice can be a topic addressed in advance, or of considerable debate at the end of an unsuccessful internship. Usually, upon completion of a predetermined period of time or number of shifts, it comes down to the opinion of the preceptor, with some input from the student and the educational institution or employer.

This premise comes perilously close to asking the preceptor to judge whether the student is competent, something which should have been determined prior to initiation of the preceptorship. Many training programs assert that preceptorship should not be considered an extension of the formal program of education; however this assertion is placed in jeopardy by the striking power delegated to the preceptor.

Formal peer assessment poses a problem because a preceptor is expected to judge the student's preparedness for certification on the basis of an eight-hour preceptor-training seminar, which is the normal time spent preparing paramedic preceptors for such

responsibility. Peer assessment is also frequently associated with the attempted measurement of student attitude.

Dawson (1992, p. 473) warns that attitude assessment can be an “inherently dangerous occupation, which should not rely on the outcomes of subjective or simplistic behavioral tools.” She explains that any such measurement would be “based on attitudes toward the activity being examined, and could not be taken as an accurate measurement of attitude as a whole.”

A consistent effort is necessary to assure that preceptors have the skills, knowledge, and interpersonal attributes required to make educationally valid assessments of interns.

Delimitations and Limitations of the Study

This study was delimited geographically to the urban and suburban areas surrounding the Las Vegas Valley. Paramedic preceptors from five fire departments and one private ambulance company were contacted and ultimately participated. Participants were chosen based on the fact that they provide care at the ALS level and were actively involved in the Clark County Paramedic Preceptor Program.

Limitations to the study were time and logistics. The time period available for the distribution and retrieval of questionnaires was initially set at 30 days and later extended to 60 days with some departments demonstrating difficulty in reaching each of their respective preceptors for questionnaire completion due to vacations, re-assignments, absenteeism and geographical separation of duty stations.

Definition of Terms

Advanced Life Support (ALS) – Advanced medical skills performed primarily by paramedics. Skills include advanced assessment, interpretation of electrocardiograms, administration of medications, and endotracheal intubation. Many paramedics also have training in some emergency procedures such as surgical airway management.

Basic Life Support (BLS) – Basic medical skills performed by all prehospital providers. These include CPR, oxygen administration, spinal immobilization, emergency childbirth assistance, splinting and control of bleeding.

Emergency Medical Technician (EMT) – The most widely obtained certification among prehospital providers. EMT's provide Basic Life Support for a wide variety of injuries and illnesses.

Paramedic – The most extensively trained prehospital emergency medical responder. Paramedics not only complete classroom and laboratory instruction, but also serve extensive hospital rotations and must usually complete field internships.

Summary

Preceptorship, the one-on-one guidance provided by an experienced colleague through real-life situations, provides the necessary transition between initial training and safe, competent and accountable professional practice. On the instructional relationship continuum the preceptor role falls in between teaching and mentoring, demonstrating characteristics of both. The core requirement of any successful preceptorship is a well-qualified preceptor. The prehospital emergency medical response relies on a competent paramedic with acute skills in the rapid intervention and stabilization of a crisis situation.

This profession demands special skills and attributes undeliverable in the classroom environment. Paramedics must be trained on the job, in actual situations, how to perform their role without hesitation or indecision. These lessons can only be instilled by a competent role model and field trainer.

The absence of objective selection criteria and extensive formal training for the preceptor role results in student performance discrepancies. In order to provide the necessary skills and supervision needed by new practitioners, paramedic preceptors must have the necessary attributes and preparation to perform such a vital role.

CHAPTER II

REVIEW OF THE LITERATURE

Literature describing educational methods in Emergency Medical Services (EMS) is scarce, and published literature specifically detailing the training of paramedic preceptors is almost nonexistent. In the absence of quantitative studies, a few published editorials and articles have become the foundation regarding the importance of preceptorship in paramedic training.

Dana Sanderson (1996) described several commonly identified weaknesses prevalent in most EMS systems. Generally, most systems lack consistency in selection requirements, preparation, and curriculum or outline of what is specifically expected throughout the preceptorship process. This results in marked inconsistencies in what preceptors cover during internship. Sanderson (1996) points out preceptors are commonly appointed without assuring necessary problem solving and communication skills. Rarely is there any incentive for the preceptor to teach well or a forum for the preceptors to share ideas and experiences. "Without guidelines on management of the paramedic internship, and with little external monitoring from professional educators and a weak selection process, the preceptorship process is doomed to be less than effective"(Sanderson, 1996, p. 27).

The importance of the field-training phase of EMS education was emphasized by Giannini (1991), "Internship should allow the student to apply and refine the knowledge and skills learned in the classroom and hospital. learn field-specific techniques for patient care, and prepare for the safe practice of prehospital medicine" (p. 59).

Giannini states that the first requirement of a successful internship is a qualified preceptor. A well-qualified paramedic preceptor "is recognized by his peers as an excellent clinician, has good teaching skills and is knowledgeable about field medicine." He further declares that completion of a workshop regarding adult learning processes and the willingness to "give 100%" are critical to successful performance (p. 60). Preceptor ambivalence is a situation often encountered by interns and is a disservice to the student as well as to the program and, most critically, to the patients who call for assistance.

Alternately, the literature describing preceptorship in other health care professions, especially nursing, are rich with theories, experiences, and recommendations. Information regarding preceptorship in health care profession education must therefore be adapted from one allied health profession to another where similarities exist, until a more expanded body of research is developed pertinent to prehospital provider education.

Relevant Theory

Joan Piemme (1986) described the qualities of an ideal preceptor. The attributes she included were "patience, enthusiasm, knowledge, well-organized, positive attitude, non-threatening, non-judgmental, flexible, open-minded, objective, sense of humor, mature, mastered clinical skills, assertive, act as an advocate for the learner, able to use resources.

self-confident, responsible, professional, and respected by their peers” (p. 188). She also insisted that it is crucial for preceptors to understand the ways in which adults learn.

Myrick (1988) believed that preceptorship would work only if carefully designed and well-formulated criteria were provided to guide preceptor selection and preparation. Myrick (1988) stressed the importance of “promoting the principles of adult learning theory, clinical teaching strategies, and methods of performance evaluation” (p. 137).

Similar to the mentors described by Daloz (1986), paramedic preceptors fulfill three main roles in relationships with their interns: provide support, challenge, and vision. “Support is evident when the preceptor establishes a bond of trust with the student and allows him to recognize that how he is feeling is understood. Without this trust, the student will not have the courage to take chances and make mistakes, which is crucial to progress in the student’s learning” (p. 16).

Hisch and Knowles (1990) considered trust the number one factor in the development of a preceptor relationship. Feeling safe in a trusting relationship can, paradoxically, promote courage to take risks with our learning, and encourage all of us to think critically about our situation and our innate power to change things. With preceptor support, the student develops a willingness to explore alternative ways of thinking and acting, which leads to the development of analytical and critical thinking skills (Brookfield, 1987).

Preceptors challenge their students by designating the distance between what the student has already mastered and what is yet to be encountered. This gap functions as space for exploration. With the guidance of a quality preceptor who has been prepared to assess the current abilities of his or her student and then lead them through every day experiences, closure of that gap can be exhilarating for all involved (Daloz, 1986).

Students often enter preceptorship with a feeling of accomplishment, after recent graduation from a grueling academic process, only to realize how relatively little they actually know. Preceptor vision pulls the students out of the “abyss of uncertainty” (Daloz, 1986, p. 17) and helps form a conceptualization of how they will perform as future EMS providers.

“A key to learning is reflection” stated Mezirow (1989). He believed that helping adults evaluate everyday experience, thus helping them understand the reasons for their problems, will undoubtedly lead to a better understanding of the options remaining open to them. He stated, “Make information relative to everyday life and common problems and allow students to construe options. This teaches them to take responsibility for their own decision making” (p. 86).

If preceptorship is to be used in the place of clinical teaching, it becomes essential that it be employed in the manner for which it was intended—a well-designed, one-to-one teaching/learning experience. If program directors elect to place students with preceptors for their clinical learning experience, it is critical that those preceptors be well qualified to assume such a role (Myrick, 1988).

The prerequisites for preceptor selection vary widely in the literature. No guidelines have been published specifically for those in EMS. Preceptor-selection criteria in nurse education and physician training have been vaguely identified by Morton-Cooper (1993). These include: 1) years of experience, 2) appropriate leadership skills, 3) communication skills, 4) decision-making ability; and 5) interest for professional growth for both student and preceptor (p 105).

Parsons, Maclean, Butcher, & Shaimian. (1985) listed four qualities of a good preceptor: 1) interest in development of practitioner's skills, 2) leadership and teaching abilities, 3) ability to role model, and 4) ability to utilize the environment and clinical excellence in his area of practice.

Westra and Graziano (1992) supported the need to establish specific selection criteria with emphasis on an individual's clinical experience as part of the preceptor application process. Helmuth and Guberski (1980) emphasized the importance of strong educational and experiential background. They also suggested a special program of study for candidates and the opportunity to work with an experienced preceptor before being allowed to precept a student alone.

Summary

Emergency Medical Technician-Paramedics have a variety of responsibilities for any given emergency response. Equipment inspection and maintenance, knowledge of response area for prompt response, scene control, management of bystanders, hazard mitigation, patient stabilization and transport, and medical treatment enroute to the hospital are a few of the most obvious. Emergency Medical Service providers must care for patients without regard for age, gender, situation, or time of day. The profession requires reactivity to situations in the absence of an ideal environment, maintaining self-control in the presence of chaos, staying calm when others are not, and dealing sympathetically with those impaired by illness or injury.

The necessary skills students must learn in order to perform this job are only partly taught in the classroom or the practical laboratory via traditional pedagogical methods.

The more permanent learning is of the experiential or discovery type accomplished only in real situations.

Preceptorship is the method commonly being utilized as the concluding step in paramedic training programs. Students are allowed to integrate theoretical material described by texts and instructors, with actual observations and applications making them more easily stored in their own developing schemas.

A preceptor, the facilitator and evaluator of this critical final phase of training, should be as carefully selected and prepared as any other central figure in the educational development of students. The literature has been unanimous in its description of the significance of the impact a preceptor will have on the progress and future performance of students.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine attributes highly correlated with future preceptor success and then facilitate the development of those attributes in preceptor candidates before selection for the role. The following questions guided the research for this study:

1. What are the attributes of a successful paramedic preceptor in the Clark County EMS System?
2. What are the necessary components in the preparation of a paramedic preceptor in the Clark County EMS System?

Population

The Clark County Emergency Medical Services System is comprised of five separate fire departments and one private ambulance service company, each employing both Advanced Life Support (ALS) Paramedics and Basic Life Support (BLS) Emergency Medical Technicians (EMT's). Departments participating in this research included Henderson Fire Department, Clark County Fire Department, Las Vegas Fire Department, North Las Vegas Fire Department and American Medical Response. In 1998, paramedics

in Clark County responded to over 140,000 medical emergencies (Clark County Fire Alarm Office Statistics).

Approximately 450 men and women held certifications as paramedics from the Clark County Health District at the time of this study. Eighty-three of those had been recognized as paramedic preceptors. Sixty-six preceptors (n=66) participated in this study by responding to the survey.

In order to be recognized as a Paramedic Preceptor in the Clark County EMS system one must only hold a current certification as a paramedic and attend a one-day orientation program. This orientation consists of a short introduction to peer assessment techniques and documentation requirements particular to the local system. Preceptor candidates participate voluntarily, without restriction or screening, and are certified merely by attending the one-day orientation without an evaluation process.

Each employer of paramedics also employs a training coordinator responsible to oversee the education and training of employees, including paramedic preceptors. This person is responsible for the pairing of students with preceptors and coordinates the preceptorship process including assuring preceptor program standards and guidelines are followed. These standards and guidelines are loosely interpreted by the various entities and commonly left up to the individual preceptors to do what they think is best in their particular circumstances.

Data Collection

A preceptor survey (Appendix I) was developed to include as many individual attributes considered possibly predictive of preceptor success. Suggestions from various

preceptors and their supervisors were incorporated into a survey form organized into five main areas including (1) basic social information (age, marital status, and parenthood); (2) education; (3) clinical experience; (3) training and experience as a preceptor; and (5) training and experience as a teacher.

A paramedic preceptor evaluation form (Appendix II), completed by the respective department training coordinators, was adapted from nurse preceptor evaluation tools developed by Davis and Barham (1989) and Hartline (1993). Preceptor performance was assessed in five weighted categories including (1) clinical competence, (2) interpersonal skills, (3) leadership skills, (4) teaching skills, and (5) professional attitude and demeanor. Ratings were on a five point modified Likert scale with an overall score resulting from the score multiplied by the individual category weighting. Adaptations of wording from a nurse preceptor evaluation to the evaluation of paramedic preceptors were completed by the researcher and reviewed by the validation committee.

Survey and evaluation instruments were reviewed for content evidence of validity internally by a group of expert preceptors and their trainers and externally by professors in the Department of Educational Leadership and Department of Educational Psychology at the University of Nevada, Las Vegas.

In order to comply with the operational guidelines of the National Research Act of 1974, all questionnaire materials and definitions of questionnaire subjects used in this research were submitted to the Office of Sponsored Programs at the University of Nevada, Las Vegas, for approval. It was determined through analysis that this research project is exempt from these guidelines.

Packets, including surveys and preceptor evaluations, were distributed to each of the department's training coordinators with directions to request every certified preceptor to complete and return. All preceptors were contacted individually and strongly encouraged to participate in this consensus survey. The method of distribution and retrieval was left to the training coordinators. Of the 83 surveys sent out, 66 were returned useable for a return rate of 80%.

Upon receipt of each completed preceptor survey, the training coordinator evaluated the individual preceptor, using the form provided (Appendix II), to assess the individual's effectiveness in the preceptor role.

Upon completion, the cover page of the survey displaying the introduction, survey directions, and responding preceptor's name was detached and retained by the training coordinator. The preceptor evaluation was stapled to the survey and after a designated completion period all responses were returned to the researcher. No identification of individuals with their specific responses was attempted.

Data Analysis

In this study four objectives were identified:

1. Developing a formula for practical prediction of preceptor success from preceptor attributes.
2. Determining if the predictions are better than chance.
3. Estimating the accuracy of the predictions.
4. Describing the relative contribution of the individual attributes to prediction of preceptor effectiveness.

Descriptive research is designed to obtain information concerning the current status of a phenomenon or to describe what exists. Further, by using correlation, relationships existing between variables can be determined. A relationship study is an exploratory method used when trying to understand a complex construct. It is one type of study yielding the identification of the pattern of relationships existing between variables. Correlation is basic to prediction. The extent of correlation between variables must be substantial to be valuable for prediction (Williams, 1986).

The multiple correlation technique chosen for this study was multiple regression. Multiple regression indicates the degree of relationship between variables. It is related not only to the correlation of the predictor variables with the criterion variable but also the intercorrelation between predictor variables. The basic goal of multiple regression is to produce a linear combination of independent variables that will correlate as highly as possible with the dependent variable (SPSS, 1999).

There are several possible methods of multiple regression, which depend upon the way in which the predictor variables are entered into the regression equation. Each predictor variable was given a score measured on an interval scale, or dummy coded for categorical variables. A hierarchical selection method was utilized for this study where factors were entered according to their hypothesized significance. Those factors predicted to be most highly correlated were entered first. The computer program Statistical Package for the Social Sciences (SPSS 9.0) was used for the analysis.

The descriptive and inferential statistical data that were generated by the Pearson Product Moment and multiple regression treatment of the raw data were analyzed in relation to the purpose of the study and the two research questions. First, means, medians,

and standard deviations were obtained from the sixty-six data sets in the sample. The data set for each subject was composed of 16 data points in five categories: (1) basic social information (age, marital status, and parenthood); (2) education; (3) clinical experience; (3) training and experience as a preceptor; and (5) training and experience as a teacher. This step provided descriptive information useful in later analysis and determined the parameters for the sample group.

Second, a correlation matrix was constructed using standardized preceptor evaluation scores with preceptor attributes. Pearson Product Moment correlation coefficients were determined.

The third step in this process was to complete a multiple regression analysis of the data using the hierarchical mathematical solution to determine if combinations of the preceptor attributes and the scores correlated with each other and to what extent. Multiple correlation coefficients were determined and a correlation matrix constructed. Tests of the level of statistical and practical significance for the correlation coefficients were applied. The statistical significance level of 0.05 for both sets of correlation coefficients was based on a two-tailed test.

Finally, analysis of the correlation coefficients and summary tables provided information on the existence, direction, and strength of relationships among preceptor attributes and scores on the evaluation instrument. The cumulative affirmative and negative responses to the research questions were then analyzed and evaluated in order to draw conclusions.

Summary

The research methodology and design supported this study in several ways. First, the population for this study, Certified Paramedic Preceptors of the Clark County EMS System, was ideal for its size and accessibility. Second, the collection of data was accomplished by utilizing the preceptor evaluation tool originally created by Davis and Barham (1989) and Hartline (1993) and adapted for the purpose of this study. Validity was established for the questionnaire through the expert review of local preceptor-trainers and supervisors as well as Professors in the Departments of Educational Leadership and Educational Psychology. The data collected was analyzed by utilizing the SPSS framework.

CHAPTER IV

FINDINGS OF THE STUDY

Introduction

The purpose of this study was to determine the factors most highly predictive of paramedic preceptor success. This study was delimited to the preceptors of the Clark County EMS system, which is comprised of five fire departments and one private ambulance service. The purpose of this research was to suggest factors that would be used to identify candidates for the role of paramedic preceptor and improve preparation of candidates selected.

The study involved the distribution of a questionnaire, which was replicated and modified exclusively for this research and the six provider agencies sponsoring preceptor programs in Clark County. In this chapter, findings from the research are described.

Survey Responses

The questionnaire, along with a cover letter delineating the study, was distributed to EMS training coordinators representing the six paramedic provider agencies within the Clark County EMS system. Each preceptor was contacted and encouraged to participate in the study. After 30 days, completed questionnaires

attached to a preceptor evaluation form filled out by the respective training coordinators for each preceptor responding to the survey were collected. Those preceptors who had not yet responded were again contacted and urged to participate and after another 30 days all remaining questionnaires were collected.

Table 1

Preceptor Response Rates

<u>Agency</u>	<u>Subjects (n)</u>	<u>Completed</u>	<u>(%)</u>
American Medical Response	22	14	63.6%
Clark County Fire Department	22	15	68.2%
Las Vegas Fire Department	19	19	100%
Henderson Fire Department	15	14	93.3%
North Las Vegas Fire Department	5	4	80%
TOTAL	83	66	79.5%

Of the six agencies that provide paramedic preceptor programs, 83 preceptors were identified. Sixty-six (79.5%) responded to the survey and were evaluated by their respective training coordinator (Table 1).

Of the 66 completed surveys, all were useable for this study even though 2 questionnaires had incomplete responses. The rational for questionnaires with less than 100% completion was that one respondent feared identification and repercussions resulting from a specific response and the other overlooked the back of the first page of

the questionnaire. The fear of personal identification and reprisal was addressed in the cover letter and downplayed by the administrators but anxiety remained for a few of the respondents.

The overall response rate (79.5%) was primarily due to logistical difficulties in reaching individual preceptors because of multiple geographical locations at which preceptors were stationed for duty, and absenteeism from their place of employment during the time interval in which the survey was administered. All preceptors were surveyed while on duty either in mandatory training classes, meetings, or other contacts with their respective training coordinator. On rare occasion, preceptors refused to participate for unexplained reasons.

Respondent Demographics

Sample demographics (n=66) were computed and reported in Table 2. The questionnaire ascertained limited demographic data. Personal identifiers were restricted to avoid the possibility of individual identification of respondents or even the possible perception thereof. Gender and race were not surveyed because it was predetermined that the population, comprised of predominately white male subjects, included a subgroup of females and racial minorities estimated to be less than 5%.

Table 2

Descriptive Statistics

<u>Category</u>	<u>Mean/percentage</u>
I. Biographical:	
Age	35.61 years
Marital Status	64%
Children	67%
II. Education:	
H.S. Diploma	100%
Associate Degree	38%
Bachelor Degree	12%
College Credits	73.34
III. Experience	
Paramedic Experience	8.53 years
Preceptor Experience (# Interns)	7.22
IV. Instructor Training:	
Preceptor training workshop	95%
CPR	60%
ACLS	43%
Pediatrics	32%
Trauma	38%
Fire Service Instructor	41%
EMS Instructor	77%
Other	48%

The mean age of all respondents was 35.61 years with the youngest preceptor 26 years of age and the most senior 57 years of age. At the time of the survey, 64% were married and 67% reported having children. Every respondent had attained an education level of at least a high school diploma or equivalent (required for certification) but only 38% had achieved an associate's degree, primarily in Paramedic Medicine or Fire Science. Only

12% had received a bachelor's degree. Since a college degree is not required or even emphasized in the occupation, the low number was not surprising. Although, when asked the amount of college credit they had accumulated, respondents estimated a mean of 72.4 semester credits, ranging from 0 to 200 credits. This suggested that even without degree requirements the majority of preceptors do seek college level continuing education.

The mean experience level of the preceptors, measured in years as a paramedic, was 8.5 with a minimum of 2 years experience (required to be a preceptor) and a maximum of 23 years. Most of the preceptors had significant preceptor experience having already evaluated multiple students; a mean of 7.22 students per preceptor.

Previous training in adult teaching methods was determined through a series of responses to specific questions. Several instructor certifications exist within EMS through seminar-type courses. Courses in Cardiopulmonary Resuscitation (CPR), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), Emergency Medical Services for Children (EMS-C), and Prehospital Trauma Life Support (PHTLS) or Basic Trauma Life Support (BTLS) train EMS professionals to teach the specific subject material using concepts in adult teaching methods. Fire Service Instructor courses introduce firefighters to adult teaching concepts in a 16-hour program. The Emergency Medical Services Instructor Course presents an expanded program (40 hours) of topics in adult education including student and instructor characteristics, lesson plan development, andragogy versus pedagogy, learning concepts, presentation styles and evaluation techniques. None of the listed instructor certifications were required for consideration as a paramedic preceptor at the time of this study. Attendance at a "preceptor workshop"

was required for orientation of all preceptors but instruction and content varied significantly.

The survey uncovered a high percentage of respondents who had one or more instructor certifications. Although 95% of the respondents reported having attended a preceptor workshop, many could not recall the location, the year they participated, or the instructor's name. Sixty per cent reported having been trained as a CPR Instructor; 43% as ACLS Instructor, 32% were instructors in trauma life support (PHTLS/BTLS), and 38% teach emergency pediatric care (PALS/EMS-C). Forty-one per cent had met the requirements to perform as Fire Service Instructors and 77% had attended and successfully completed a 40-hour Emergency Medical Service Instructor Course.

Characteristics of Preceptor Performance Evaluation

This correlation study attempts to discover and clarify relationships, as well as how effectively certain participants' attributes could be used to predict their scores on a performance evaluation using correlation coefficients. The relationships among personal and professional attributes of paramedic preceptors and their ability to teach and evaluate paramedic interns were observed and analyzed anecdotally prior to this study. The ability of the identified preceptor attributes to predict performance as a paramedic preceptor was considered important for practical use in the screening and development of preceptor candidates.

The sample populations' performance evaluation means, medians, standard deviations, minimum, and maximum scores were reported in Table 3. The performance evaluation (Appendix II) was a combination of weighted-factors adapted from nurse-preceptor

evaluation forms developed by Davis and Barham (1989) and Hartline (1993) and validated by an internal expert committee.

Table 3

Preceptor Performance Evaluation Scores

N		66
Mean		367.42
Median		362.5
Standard Error of the Mean		10.14
Standard Deviation		82.36
Minimum		160
Maximum		500
Percentiles	25	308.75
	50	362.5
	75	431.25

Preceptor performance was assessed in five categories including clinical competence (35%), interpersonal skills (25%), leadership skills (10%), teaching skills (20%), and professional attitude and demeanor (10%). Ratings were on a 5- point modified Likert scale, with an overall score resulting from the rating multiplied by the category weighting with a resulting range of a lowest possible score of 100 to a highest possible score of 500. Evaluation scores were then standardized, using z-scores, within each rater in order to assess all scores on the same scale.

Table 4

Preceptor Evaluation Score Frequency

Score	Frequency	Percent	Cumulative percent
150-200	2	3.0	3.0
201-300	12	18	21.2
301-400	31	46.5	68.2
401-500	21	31.4	100

Correlations between preceptor attributes and preceptor evaluation scores are presented in Table 5. Significant zero-order correlations were found between evaluation scores and attributes grouped under Instructor training. The greatest correlation was with the EMS Instructor designation with slightly lower correlations with Instructor credentials in PALS, PHTLS/BTLS, ACLS and CPR.

The only other attribute showing a significant correlation with preceptor evaluation score was cumulative college credits categorized under education. None of the attributes categorized under experience or social demographics was significant.

Table 5

Correlations -Preceptor Attributes and Standardized Preceptor Evaluation ScoreIV. Instructor Training

EMS Instructor	.412***
PHTLS/BTLS Instructor	.265**
PALS Instructor	.264**
ACLS Instructor	.205*
CPR Instructor	.182*
Fire Service Instructor	.125
Other related training	(.026)

III. Experience

Paramedic experience	(.085)
EMS experience	.161
Fire service experience	(.013)
Preceptor Experience	.132
Other related experience	.06

II. Education

Total college credits	.213**
Associates Degree	.15
Bachelors Degree	.123
Paramedic training program	(.001)

I. Social Attributes

Age	(.144)
Marital status	.032
Children	(.040)

Note: n = 66; two-tailed test

() Negative correlation

* p < .1. ** p < .05. *** p < .01

To examine how accurately the four target constructs predicted preceptor evaluation scores, a hierarchical multiple regression analysis was conducted in which specific attributes for each construct were entered as a set. Variables were entered into the

regression in a sequential order reflecting their perceived significance based upon the literature review.

Training in adult teaching methods was predicted to have the greatest influence upon preceptor ability with field experience considered second. Social circumstances were considered least in importance with formal education predicted somewhere in the middle. This was the predetermined order of entrance into the regression equation. Results of this analysis are summarized in Table 6.

Table 6

Hierarchical Multiple Regression Summary - Preceptor Attributes

Variable Groupings	R Square	R Square Change	F Change	Sig. F Change
Instructor	.238	.238	2.498	.026*
Experience	.332	.094	1.443	.225
Education	.378	.046	.866	.491
Social	.439	.061	1.582	.207

(dependent variable = Standardized Preceptor Evaluation Score)

* $p < .05$

The value of R^2 indicates the total amount of variance in evaluation scores accounted for by the variable entered, and the change in R^2 indicates the amount of variance accounted for by each set of variables over and above previously entered sets. For the full model R^2 was significant, $R^2 = .44$, $F(19,44) = 1.811$, $p = .053$, and indicated that 44% of the variance in evaluation scores was accounted for when all four sets of predictors were included. This left 56% of the variance in evaluation scores unaccounted for. Although

the overall performance rating was reached by the judgement of individual assessors and not mathematically, there was still a definite relationship between preceptor evaluation scores and preceptor attributes.

Instructor training variables accounted for over half (24%) of all the variance accounted for in evaluation scores and was the only construct that reached statistical significance ($p \leq .05$). Experience (9%), education (5%) and social demographics (6%) were not statistically significant and therefore possibly due to chance.

To explore further the link between preceptor evaluation scores and the most significant construct variable, instructor training, a second multiple regression analysis was conducted to examine correlations between individual attributes within the Instructor training category and preceptor evaluation scores. The results of this analysis are summarized in Table 7.

Table 7

Hierarchical Multiple Regression Summary - Instructor Training

Instructor Groupings	R Square	R Square Change	F Change	Sig. F Change
EMS	.169	.169	12.651	.001*
Instructor Fire Service	.184	.015	1.121	.294
Instructor PHTLS/BTLS	.230	.046	.843	.504
PALS/ACLS				
CPR				
Additional Training	.238	.008	.584	.448

(dependent variable = Standardized Preceptor Evaluation Score)

- $p \leq .001$

The instructor training attributes were entered in a hierarchical sequence beginning with the EMS Instructor designation. This 40-hour course is the most comprehensive regarding adult learning and teaching methods with less emphasis on emergency medical content. The second attribute entered was the 16-hour Fire Service Instructor designation, which again emphasizes presentation methods geared towards adults but does not include any emergency medicine in its content.

The third group of variables entered were the PHTLS/BTLS, PALS, ACLS, and CPR Instructor designations. These are 16-hour seminars in advanced topics for emergency medicine. The instructor training is highly content specific with less emphasis on teaching and learning methods.

The last variable entered was miscellaneous additional training the respondent might receive that would better prepare one for the preceptor role. This variable was purposefully vague, recorded as only yes or no, and not differentiated any further.

For the full model, R^2 was again statistically significant, $F(7,56) = 2.498$, $p < .05$. The analysis demonstrated that when all the instructor constructs were included 23.8% of the variance in preceptor evaluation scores was accounted for but EMS Instructor training alone was responsible for 16.9% of that overall variance. EMS Instructor was the only instructor variable to achieve statistical significance, the other instructor groups failed to do so. While the EMS Instructor variable was the most important in predicting the overall evaluation score for a preceptor, the other instructor training variables added together accounted for an additional 6.9% of overall variance.

In other words, it was possible to predict the overall preceptor evaluation score with some confidence using only the Instructor Training attributes. The EMS Instructor was

by far the best predictor of preceptor success. The other instructor attributes contributed to a lesser extent but did not individually reach a level of statistical significance. They were, in order of importance: PHTLS/BTLS Instructor, PALS Instructor, ACLS Instructor, CPR Instructor, and Fire Service Instructor

Research Question One

What are the attributes of a successful paramedic preceptor in the Clark County EMS System? Instructor training was the construct most highly correlated with preceptor success as measured by the preceptor evaluation instrument. The EMS Instructor certification was the only individual attribute that reached the level of statistical and practical significance to be of predictive value. The correlation coefficient was 0.412. Individually, instructor training in advanced emergency medical topics, PHTLS/BTLS, PALS, ACLS, and CPR, demonstrated statistically significant correlations (Table 5) but had little additional predictive value above the EMS Instructor for the preceptor evaluation score.

Total college credits, categorized under the education construct, also demonstrated a statistically significant Pearson Correlation (.213) but as a group, education did not achieve statistical or practical significance in its contribution to prediction of overall evaluation scores (Table 6).

None of the other educational, social, or experience attributes studied reached the .05 level of significance in correlation with the standardized preceptor evaluation score and therefore were rejected as possible predictors for paramedic preceptor success.

Research Question Two

What are the necessary components in the preparation of a paramedic preceptor in the Clark County EMS System? The findings are clear in their portrait of what is necessary for successful performance as a paramedic preceptor. Social, educational, and experience requirements demonstrated little or no correlation with high scores on the preceptor performance evaluation. The findings support the idea that education in adult teaching and learning methods was a decisive factor for preceptor success. The 40-hour EMS Instructor course alone was responsible for 16.9% of the variance in preceptor scores. Content specific instructor training courses were less predictive but still, as a group, training as an instructor in emergency medical topics was statistically significant in its prediction of preceptor evaluation scores.

Summary

For more clarity and ease of comparison, the relationships or correlations that achieved statistical significance were summarized. When the correlation coefficients were determined for preceptor attributes with preceptor evaluation score, only four of the correlations – EMS Instructor, Trauma Instructor (PHTLS/BTLS), Pediatric Instructor (PALS), and total college credits – achieved the 5% level for statistical significance. The ACLS Instructor attribute was of practical significance (0.205).

With the resulting correlation in the Instructor Training construct, four constructs of Instructor attributes were used to predict overall preceptor performance. A hierarchical regression was performed entering all the instructor variables in order of perceived predictive value according to their emphasis on adult educational methods. Overall the

value of prediction was significant (23.8%). The most important of these was EMS Instructor training at 16.9%. The other instructor variables accounted for the remaining 6.9%.

The individual attribute of EMS Instructor was the independent variable that, with all the treatments of the data, consistently was the strongest and most important predictor of preceptor success.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A summary of the study, conclusions based upon the research questions and recommendations relative to the study were included in this chapter. It concludes with recommendations for further study.

Summary

The purpose of this study was to identify attributes of paramedic preceptors that could be used to select candidates for the role and determine an effective program of training to prepare those selected. It was not known if certain demographic attributes would be predictive of preceptor quality. If a relationship existed, objectively identified preceptor attributes could be used as valid predictors in a paramedic preceptor selection process.

A review of the literature was conducted to gather information regarding preceptor selection and development in other geographical areas and related professions. The expected results of the study were based on this information.

It was hypothesized that selection based purely on seniority or volunteerism was inadequate and did not result in the best preceptors being chosen. It was also suggested

that training in the methods of adult education was critical to the development of preceptor candidates.

A quantitative description and correlation study was completed based upon data gathered from paramedic preceptors in the Clark County EMS System in spring of 1999. The sample ($n = 66$) consisted of paramedics from five fire departments and one private ambulance service who were certified by Clark County to perform the preceptor role. Participants completed a biographical survey and were scored by their respective department training coordinators on a preceptor performance evaluation instrument.

Descriptive and inferential statistical techniques were used to treat the data. Pearson Product Moment correlation and a hierarchical multiple regression technique produced correlation coefficients among the preceptor attributes and standardized preceptor valuation score. A statistical significance level of 0.05 was used for the analysis of variance. The level of practical significance needed to determine if a relationship existed between variables in this study was 0.20.

All findings were summarized, questions answered, conclusions drawn, and recommendations formulated as to the selection criteria and preparation required for a successful paramedic preceptor.

Findings from the Literature

The findings of the study in relation to the literature were summarized below:

1. The preceptorship, in EMS education, is a critical phase in development of safe and competent prehospital emergency care providers.

2. A well-qualified preceptor is the first and most important requirement of a successful preceptorship.
3. A well-qualified preceptor is recognized not only by their excellence as a clinician, but also by their teaching skills and problem-solving ability.
4. Several, commonly identified weaknesses exist in preceptor programs of most EMS systems. Specifically, inconsistency in selection requirements, inadequate preparation, and an absence of defined expectations regarding the preceptorship process.
5. Preceptor selection criteria most commonly used were often casual and usually did not include validated procedures.
6. Without inferences translated from the nursing literature, very little was written concerning the validation of selection methods for paramedic preceptors.
7. There was a need to determine through the use of validated selection criteria the necessary attributes needed by prospective paramedic preceptors.

Findings from the Study

The findings of the study in relation to the research questions were summarized below:

1. Variables categorized within the Instructor training construct demonstrated a definite relationship ($R^2 = 0.238$) with the standardized preceptor performance evaluation score assessed independently by the respective evaluators.
2. Pearson Product Correlation coefficients for five of the seven Instructor certifications considered were statistically significant at the 0.1 level. Only one other single attribute of the 16 considered met this level of significance, total college credits.

3. No statistically significant relationship was found between any other group of variables and preceptor score including constructs of social, educational, and clinical experience demographics.
4. Of the variables categorized under the instructor construct, EMS Instructor training, the most comprehensive training program in adult educational methods considered, demonstrated the most clear-cut relationship with preceptor evaluation score ($R^2 = 0.169$, $F(1,62) = 12.651$, $p \leq .001$). EMS Instructor certification was the most valid predictor for selecting paramedic preceptors. The change in the coefficient of determination resulting from inclusion of all other instructor attributes was not statistically significant.

Conclusions

The findings from this study served as the basis for the following conclusions.

The selection of quality paramedic preceptors is critical to strengthen the development of safe and competent paramedics. In order to handle the situations encountered in the prehospital environment and perform the emergency care expected of them, paramedic interns must be led through a phase of field training by an experienced professional trained in the methods of adult education.

Selection of quality preceptors should be based upon objective criteria that emphasize the importance of training in instructional methods for adult learners. Certification as an EMS Instructor, 40 hours of training in adult education topics including student learning styles and evaluation techniques, was the most significant variable in the prediction of preceptor quality and therefore, should be a minimum requirement for all preceptors.

Training as an instructor in ACLS, PALS/EMS-C, PHTLS/BTLS, and CPR also added slightly to the predictive power for quality. These courses should be emphasized in preparation for paramedic preceptor selection.

Clinical experience played no statistically significant role in the prediction of preceptor score. Since the minimum level of clinical experience for the sample surveyed was 2 years, no conclusions can be made regarding the possibility of precepting with less. The study did not demonstrate a statistically significant correlation of preceptor score with increasing years of experience, either as a paramedic or other related experience. As a selection criterion, a minimum tenure should be mandated, the amount determined in advance based on local factors. Additional merit for more experience was not determined to be valid in this study.

Formal education, measured by a college degree, was not significantly correlated to preceptor quality. Although, continuing college level education, measured in total accumulated college credits, was statistically significant in its correlation with preceptor scores and should be considered as a sign of self motivation and interest in personal development, characteristics of a good preceptor.

Social demographics displayed no significant correlation with preceptor success and should not be criteria for preceptor selection.

The components of adequate preparation for paramedic preceptors, research question two, has thus been answered. The preparation for becoming a paramedic preceptor, indeed, becomes the selection process. With two years of clinical experience and certification as an EMS Instructor considered the minimum requirements, candidates should be adequately prepared for the preceptor role. Additionally, candidates with

instructor certifications in PALS/EMS-C, PHTLS/BTLS, ACLS, and CPR and continuing college level education credit should be considered as exceptional candidates with considerable motivation and interest in personal growth.

Recommendations for Further Study

In view of the results of this study, recommendations for future research were offered.

1. It is recommended that personality traits, (eg. Myers-Briggs Trait Inventory) be explored in a possible relationship with preceptor success.
2. It is recommended that motivation be further explored as a criterion for preceptor selection.
3. It is recommended that the research be expanded past the individual preceptor and onto the preceptor program regarding expectations and requirements of the field internship.
4. It is recommended that this study be replicated and expanded to include more subjects and a wider array of attributes in exploration of a better predictor model for preceptor quality.

APPENDIX I
COVER LETTER AND PRECEPTOR SURVEY

**University of Nevada –
Las Vegas
Department of
Educational Leadership**

Brian Tilton
2739 Sandalwood Ave.
Henderson, NV 89014

February 19, 1999

Paramedic Preceptors,

I am conducting a survey as part of a Masters Thesis for the University of Nevada, Las Vegas. My goal is to research and identify Paramedic Preceptor attributes in an attempt to develop a comprehensive Paramedic Preceptor selection and training program. I invite you to participate by taking the time to complete the attached questionnaire. Please take a few moments to complete the biographical information and then respond to the survey regarding your opinions concerning past preceptor training and current conditions.

Your responses will remain anonymous to the researcher and will in no way affect your current or future status as a paramedic preceptor. Cumulative results are needed for statistical analysis but individual responses will not be present in the results. Upon completion of the study, surveys will be destroyed.

Should you have any questions or comments regarding this survey, please contact Brian Tilton at 896-9138 or briantilton@netscape.net. Or Dr. Clifford McClain at 895-3860. For questions regarding the rights of research subjects contact the Office of Sponsored Programs at 895-1357.

Your participation in this research study is strictly voluntary. If you choose not to participate, please return this packet to your EMS training coordinator.

I have read this material and choose to participate voluntarily.

Signature

Name (Please Print)

PRECEPTOR SURVEY**I. Personal Information**

Age: ____

Marital Status: ____ SINGLE ____ MARRIED

Children: ____ YES ____ NO

II. Education:

High School Diploma ____ GED ____

Associates Degree ____ Subject ____

Bachelors Degree ____ Major ____

Masters Degree ____ Dept. ____

College credits earned to date (total amount) : ____

Length of paramedic training program (excluding internship):

3 months ____ 6 months ____ 9 months ____ 1 year ____ 2 years ____

III. Clinical Experience

Paramedic Experience: ____ years ____ months

Other EMS Experience: ____ years ____ months

Fire Service Experience: ____ years ____ months

Other Related Experience: ____ years ____ months. Title ____

IV. Preceptor Experience

Did you participate in a Preceptor Training Workshop?

____ YES ____ NO

What year? 19 ____ Instructor: ____ Location: ____

How many newly trained paramedic students have you precepted since becoming a preceptor?

How many experienced paramedics transferring in from other systems have you precepted since becoming a preceptor?

IV. Teaching Experience

Certifications:		<u>Initial Certification Year</u>
CPR Instructor:	_____ YES _____ NO	19__
ACLS Instructor:	_____ YES _____ NO	_____
PHTLS/BTLS Instructor:	_____ YES _____ NO	_____
PALS / EMS-C Instructor:	_____ YES _____ NO	_____
EMS Instructor:	_____ YES _____ NO	_____
Fire Service Instructor:	_____ YES _____ NO	_____
Paramedic Preceptor:		_____
Other Instructor certifications:	_____	_____
	_____	_____
	_____	_____

Have you attended any other courses, seminars or classes involving teaching and/or counseling methods? List the course and approximate number of hours.

Have you or do you currently coordinate, instruct or mentor a learning group or class on a volunteer basis (without pay)? (eg. Explorers, Boy Scouts, church group, etc) List each group.

APPENDIX II

PARAMEDIC PRECEPTOR PERFORMANCE EVALUATION

Paramedic Preceptor Evaluation

Rate the Paramedic Preceptor in each of the following categories by circling the number corresponding with your judgement of their ability (1 = inferior, 2 = below average, 3 = average, 4 = above average, 5 = superior) in the respective area.

I. Clinical Competence

- A. Demonstrates the ability to make deliberate and thoughtful patient care decisions based on thorough assessment, medical knowledge, and prehospital protocol.

1 2 3 4 5

- B. Demonstrates the ability to interpret and apply protocols, procedures, and standards in order to perform the clinical skills necessary for effective functioning in the prehospital environment.

1 2 3 4 5

II. Interpersonal Skills

- A. Promotes positive confidential interpersonal relationships through tactful, patient, direct, and sensitive interaction. Demonstrates a positive and professional attitude at all times.

1 2 3 4 5

- B. Promotes and provides both positive and negative feedback to students and other team members.

1 2 3 4 5

- C. Constructively resolves professional or bureaucratic conflicts (discusses concerns with those who can affect change).

1 2 3 4 5

III. Leadership Skills

- A. Demonstrates leadership skills (sets priorities, makes sound decisions, takes necessary risks, and is a role model for the intern).**

1 2 3 4 5

IV. Teaching Skills

- A. Demonstrates expertise in teaching situations (both cognitive and practical exercises).**

1 2 3 4 5

- B. Demonstrates needed teaching skills (identifies learning needs of intern and plans activities to meet those needs with appropriate evaluation).**

1 2 3 4 5

V. Professional Attributes

- A. Enthusiastically participates and supports health care provider team activities (provides excellence in patient care, continuing medical education and refresher training, quality assurance and improvement, and peer support).**

1 2 3 4 5

- B. Exemplifies a positive professional appearance via dress and demeanor.**

1 2 3 4 5

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