AD-A209 659

DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1b RESTRICTIVE MARKINGS

3 DISTRIBUTION / AVAILABILITY OF REPORT
Approved for public release;
Distribution unlimited

2b DECLASSIFICATION / DOWNGRADING SCHEDULE

4 PERFORMING ORGANIZATION REPORT NUMBER(S)
26-89

5 MONITORING ORGANIZATION REPORT NUMBER(S)

6a NAME OF PERFORMING ORGANIZATION
US Army-Baylor University
Graduate Program in Health Care

6b OFFICE SYMBOL (If applicable)
Admin/HSHA-IHC

7a NAME OF MONITORING ORGANIZATION

6c ADDRESS (City, State, and ZIP Code)
Ft. Sam Houston, TX 78234-6100

7b ADDRESS (City, State, and ZIP Code)

8a NAME OF FUNDING / SPONSORING ORGANIZATION

8b OFFICE SYMBOL (If applicable)

9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c ADDRESS (City, State, and ZIP Code)

10 SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11 TITLE (Include Security Classification)
A STUDY TO DETERMINE THE NATURE, IF ANY, OF THE DIFFERENCES IN PHYSICIAN ASSISTANTS' PERCEPTIONS, THEIR TRAINING, AND THEIR UTILIZATION

12 PERSONAL AUTHOR(S)
CPT Diane M. Flannery

13a TYPE OF REPORT	13b TIME COVERED	14 DATE OF REPORT (Year, Month, Day)	15 PAGE COUNT
Study	FROM Jul 85 TO Jul 86	Dec 85	45

16 SUPPLEMENTARY NOTATION

17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	Health Care, Physician Assistants Training and Use

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

This study was conducted to determine the nature of differences between what physician assistants (PA) think their job should be, what they have been trained for, and what they are actually doing in Army Health Care Organizations. Samples of the actual duties performed by PAs were recorded and sorted into either clinical, administrative, or managerial. PAs' perceptions of what they were trained for were measured with a survey. Results showed a significant difference between training and actual duties in clinical functions, in particular, PAs were not treating inpatients, extended patients, and obstetrical and gynecological patients. There was complete agreement between their training, use, and perceptions on appropriate use in administrative tasks. Management functions did not show a consistent trend between the PAs.

20 DISTRIBUTION / AVAILABILITY OF ABSTRACT
[X] UNCLASSIFIED/UNLIMITED [ ] SAME AS RPT [ ] DTIC USERS

21 ABSTRACT SECURITY CLASSIFICATION

22a NAME OF RESPONSIBLE INDIVIDUAL	22b TELEPHONE (Include Area Code)	22c OFFICE SYMBOL
Lawrence M. Leahy, MAJ, MS	(512) 221-6345/2324	HSHA-IHC

DD Form 1473, JUN 86 Previous editions are obsolete. SECURITY CLASSIFICATION OF THIS PAGE

A STUDY TO DETERMINE

THE NATURE, IF ANY, OF THE DIFFERENCES IN PHYSICIAN ASSISTANTS' PERCEPTIONS, THEIR TRAINING, AND THEIR UTILIZATION

A Graduate Research Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Healthcare Administration

by

Captain Diane M. Flannery, MSC

December 1985

TABLE OF CONTENTS

LIST OF FIGURES

Chapter I

INTRODUCTION

Conditions Which Prompted the Study

Since the inception of the idea of a Physician Assistant (PA) in the mid-1960's to the present time two decades later, controversy has never ceased. The medical community debates the role and purpose of the PA; the economists question his productivity and contribution to health care costs; the military services disagree on the PA's rank; patients are surveyed for their satisfaction with care provided by PA's; and the future of PA's is continually a subject for discussion in the literature. Research has been done not only on the effectiveness of the PA as a health care provider, but in the military, his effectiveness as a soldier was also studied. Considering all the controversy and all the evaluations done to resolve the controversial issues, it is reasonable to ask how the PA has been affected. What does he think his job should be? For what duties and responsibilities is he trained? How is he actually being utilized?

These questions are especially applicable to PA's in the Army because of the variety of assignments they may have. A PA could be assigned to a combat unit, a community hospital, or a medical center. Each assignment holds different expectations and requirements of the PA even though all PA's in the Army, unless they specialize, receive the same training.

In 1971, the Army's PA program was established; and now each year, about thirty enlisted personnel begin the two-year curriculum required of the Army's PA's. The first year of instruction, conducted in the classrooms of the

Academy of Health Sciences at Fort Sam Houston, consists of basic science and clinical instruction. During the second year the PA students perform a clinical practicum at one of the Army's hospitals. The curriculum of the PA program is continuously expanded, modified, and updated so that the graduates are able to meet the Army's needs for primary health care providers. After two years of intense training, the graduates of the PA program are ready to perform as they were taught. Are their expectations fulfilled? Are they given duties and responsibilities commensurate with their training?

At Fort Ord, California there are authorizations for twenty-five PA's in the 7th Infantry Division (Light) but there are usually fewer than twenty PA's assigned. These PA's conduct sick call at battalion aid stations, staff the Consolidated Troop Medical Clinic, and provide medical support to the units in the field. Their duty days begin as early as five o'clock in the morning and last until five o'clock in the evening. These long days are filled with many duties and responsibilities, some which the PA's may recognize and accept as those rightfully belonging to a PA and others which they may not so willingly accept either because they have not been trained or because they do not think it is appropriate for a PA to be doing those things. The training, utilization and perceptions of these PA's affect how well they accomplish the missions given them and more importantly affect the kind of medical care the soldiers of the 7th Infantry Division (Light) receive. For these reasons and because the clinical practicum for two PA students is conducted at Silas B. Hays Army Community Hospital (SBHACH), it is especially appropriate to study the nature, if any, of differences in PA's perceptions, their training, and their utilization by using the PA's at Fort Ord.

This research, suggested by the Deputy Commander for Clinical Services at SBHACH will identify in what areas and to what extent differences exist in the training, utilization, and perceptions of the PA's. The results of this study may be of interest to the Academy of Health Sciences, the Commanders and supervisors of PA's, and the PA's themselves. The results may suggest areas for further research of a broader scope, may indicate the need to change the PA's training or utilization, or may indicate a need to coordinate the PA's expectations with the reality of his training and utilization.

Statement of Research

To determine the nature, if any, of differences between what physician assistants think their job should be, what they have been trained for, and what they are actually doing in Army Health Care Organizations.

Objectives

The objectives of this research were:

1. Determine the major duties, tasks, and responsibilities which were used in the comparisons of the physician assistants' preceptions, their training, and their actual utilization.

2. Develop a data collection form on which physician assistants' could record the facts and their opinions concerning each of the duties, tasks, and responsibilities selected for the comparisons.

3. Survey physician assistants to determine what positions, jobs, and responsibilities they think they should have.

4. Determine which of the duties, tasks, and responsibilities were included in the training the PA's received during the two year PA course.

5. Determine how the surveyed PA's are actually being utilized and if they perform the functions listed on the form.

6. Analyze the results of the PA's surveys.

7. Present the results in a meaningful way so the nature of any differences would be evident.

Criteria

Two criteria were used to determine if a difference existed between a PA's perceptions and his training or utilization and between the PA's actual training and utilization. They are as follows:

1. In each category of tasks - clinical, administrative, and managerial - this criterion applied. If, for any individual duty, task, or responsibility, any of the PA's checked responses that showed some disagreement, then a difference was counted. For example, if a PA indicated that he was not delivering babies but that he had been trained to do so and thought he should be doing so, two differences were counted - one for the disagreement between his training and utilization and one for the disagreement between his perception and utilization. Every difference from all the data collection forms were counted and included in the findings.

2. For each individual duty, task, or responsibility, only if there were five or more disagreements of the same type was it individually recognized and graphically represented. Fewer than five similar differences were only reported along with all the other differences in each category.

Assumptions

Two assumptions were required to make the surveying of the PA's and analyzing of the results possible.

1. Not every duty, task, or responsibility a physician assistant could have needed to be used in comparing his perceptions, training, and utilization in order to make a realistic determination about the existence of overall differences.

2. If a PA did not mark a statement about what he thought about one of the duties, tasks, or responsibilities, it was assumed that he had no reason to mark it one way or the other. If he did not mark whether he should or should not be performing a certain function, it was assumed that he had no strong preference and he was not asked to make a choice.

Limitations

1. This study was cross-sectional and only captured the perceptions of the Physician Assistants at the time at which they completed the surveys.

2. Only Physician Assistants at Fort Ord were used in this study.

3. PA's who were trained in one of the specialties, such as orthopedics or surgery, were not included in this study. Only the PA who completed the two years of PA training was surveyed.

4. Nothing in the literature indicated how much disagreement in PA's perceptions, jobs, and training was expected or acceptable; and nothing tells how much disagreement is too much. Therefore, this research was designed to simply determine and report any and all differences found among PA's at Fort Ord, without making a judgement on the training or utilization of PA's.

Review of the Literature

The research of the literature using the Medical Literature on Line (MEDLINE) file today showed that what Bair said in his 1980 article about physician extenders is still true in 1985. He said then that very little had been published concerning the training, utilization, and performance of Army PA's[1]. Although the literature was filled with material about PA's, there were only a few articles devoted to the Army PA and none which specifically asked about the nature of any differences between the training,

utilization, and perceptions of the Army PA. Most of the research which had been done was done for the PA population in general, not just the Army PA's, and was done to determine how well PA's were accepted by physicians and by patients. These studies were done in the early to mid 1970's when the notion of a physician assistant was still something people expected to fade. Once the acceptance of the PA was fairly well documented and his position in the health care delivery system was generally recognized as something permanent, researchers became interested in other aspects of the PA.

Besides describing a study of military physicians and commanders who expressed their satisfaction with and willingness to delegate many duties to their PA's, Bair also described a 1975 study in which 88% of the PA's surveyed were satisfied with their duties and 84% said they were able to devote 75% of each day to delivering primary care. 94% of these same PA's said they were well received by their patients and other health care providers[2]. This research was among the first designed to get the PA's perspective on satisfaction and utilization. The study done on the PA's at Fort Ord also concentrated on the PA's points of view and only used the training publications and the questions of the physician supervisors to verify the training and utilization of the PA's by identifying discrepancies in what the PA's reported and then resolving those discrepancies. Determining PA satisfaction with their jobs was not a goal of the Fort Ord research. The study's results could suggest areas in which there is the potential for dissatisfaction, but further research would be required before any such conclusions could be made.

One chapter of Schneller's book described a study of tasks PA's do, in an attempt to determine how PA's perceive their role and responsibility in the medical decision-making process. For each task on the survey, the PA's were asked how much physician supervision was required. The results were

quite interesting because the two tasks which are the most crucial in medical decisic.-making are the two tasks the PA's identified as needing the least physician supervision - taking the patient's history and doing the physical exam. Other findings which Schneller reported were that PA's want involvement in comprehensive care and do not want to simply work up a patient and never see that patient again. They want and expect autonomy but realize there must be physician supervision. PA's do not equate their role to that of a medical doctor (MD) but realize they have an identifiably different role. Finally, PA's expect to have their role increase over time. PA's working with individual physicians expand their roles by negotiating with their doctors for permission to do certain tasks. Schneller mentioned a concern that there was the potential for PA's to consider the negotiated tasks as tasks they have the right to perform for all time[3]. The study described by Schneller has implications for the PA study done at Fort Ord. It seems reasonable that if what Schneller reported is accurate, then the PA's at Fort Ord should express the desire to perform most of the tasks listed on the survey form with the possible exception of some of the administrative and managerial functions. In fact, some of the tasks were used on the data collection forms in both the study Schneller described and the one done on the Fort Ord PA's.

Another study found in the literature which could relate to this one done at Fort Ord was described in Elaine S. Bursic's chapter of Bliss and Cohen's book. Bursic did a study to determine the present job status and factors affecting the employment of PA's. In 1974, she found through questionnaires and narrative answers to open-ended questions that only 30% of the PA's surveyed were content with their jobs. The problems that the PA's reported were that there was a general lack of knowledge about PA's and their abilities; there was no precise legislation on the status of PA's and their permissible job activities; they were not optimally employed; some were ove taxed and

given too much of the physician's work; and some were underused, given tasks nurses aides or licensed practical nurses usually perform[4]. If any of these problems exist among the PA's at Fort Ord, this research may give an indication of the areas in which these problems exist; but again, further research would be required before any conclusions could be drawn.

Three other studies found in the literature may relate to this research. Coe and Fichtenbaum in 1972 found that the role of the PA as a generalist or specialist was not very well defined[5]. Sadler found that PA's needed training in organization management skills[6]. Finally, in Bliss and Cohen's book in the section describing the study of the costs of the supervision of PA's, it was mentioned that the single most important test of a PA's competence is his ability to judge where his competence ends[7]. The findings from these studies could be reinforced or updated to a certain limited extent by the study done at Fort Ord. The nature of any differences in PA's training, utilization, and perceptions could indicate either continued confusion or clarification about his role, the status of his training in managerial tasks, or whether he feels competent to do certain tasks. The study done on Fort Ord PA's did not have as its purpose the goal of addressing any one of the three items mentioned above so its relationship to the three studies is again one of suggesting areas for further research.

One last research effort that has not been published but which has several similarities to this study was available through the Directorate of Evaluation and Standardization (DOES) at the Academy of Health Sciences, Fort Sam Houston, Texas. This research was a survey of PA's soldierly skills and was similar to the Fort Ord research in that the total number of returned surveys was 21, both PA's and their supervisors were asked to respond, and lists of duties, tasks, responsibilities were used along with statements indicating something about those functions. Some functions appear in both studies. The DOES study

had sections devoted to leadership and management skills along with the section on clinical skills. This is another similarity to the Fort Ord research which was designed without prior knowledge of the DOES study.

As already mentioned, the literature on PA's is vast and is filled with research and studies, but most of it does not directly relate to the nature of any differences in Army PA's training, utilization, and perceptions. Although almost anything written about PA's can have an impact on their perceptions, the studies previously identified are most closely related to the Fort Ord study. Again, it is evident that the literature is lacking in research on Army PA's.

Research Methodology

To accomplish the objectives of this research, the following steps were required:

1. The literature and PA Program of Instruction were reviewed to determine what duties, tasks, and responsibilities were included on the data collection form.

2. Based upon above review, the duties, tasks, and responsibilities of Physician Assistants were divided into clinical, administrative and managerial, and were listed on a data collection form.

3. Instructions to the PA's were prepared along with statements to which they were asked to respond. These were listed on the form also. See Appendix A for sample of data collection form.

4. A section of the data collection form was designed for collecting demographic data such as name, age, sex, rank, specialty skills, time in service, time in present position.

5. The data collection form was reviewed by the Senior PA at Fort Ord and tested by two PA's who were in a student status and not included in the study.

6. All PA's at Fort Ord who were available on post during the data collection period (not TDY or on leave) were given a copy of the data collection form and were asked to complete it.

7. The Programs of Instruction and Course Objectives for both Phase 1 (classroom) and Phase 2 (residency) were obtained from the PA Branch at the Academy of Health Sciences and were reviewed to determine what training PA's receive.

8. When necessary, the PA's supervisor was visited and asked whether or not each duty, task, and responsibility listed on the form was required of his PA. This interview told how the PA was being utilized.

9. The results from the PA's responses, supervisor's responses, and review of training were compared. If there were any discrepancies, these were resolved through personal interviews and the data collection form was annotated to reflect the resolution. An example of a possible discrepancy would be a PA who indicated that he received training in a particular task but that task was not part of the PA Program of Instruction. An explanation may be that he received that training from another source. His data collection form was left to show he was trained. The interviews were also used to determine causes of disagreements among statements on the form; for example, a PA could accidentally check both he should not and would like to perform one of the functions.

10. After all discrepancies in what the PA's reported, what their supervisors reported, and what the Programs of Instruction reported were resolved, the PA's perceptions, their actual training, and their utilization was analyzed in the following way:

a. If a PA did a certain function for which he was never trained, that response was counted as a disagreement between training and actual job. (Group 1, type A)

b. If a PA was not doing a function for which he was trained, that response was counted as a disagreement between training and actual job. (Group 1, type B)

c. If a PA thought he should be doing a function or would like to have been doing a function which he was not presently doing, that response was counted as a disagreement between PA's perception and actual job. (Group 2, type A)

d. If a PA indicated he should not be doing a certain function which he was presently doing, that response was counted as a disagreement between PA's perception and actual job. (Group 2, type B)

e. If a PA indicated he would like to do a job for which he was not trained, that response was counted as a disagreement between PA's perception and training. (Group 3, type A)

f. If a PA reported that he should not be doing a function for which he was trained, that response was counted as a disagreement between PA's perception and training. (Group 3, type B)

g. There was no disagreement when a PA was doing a function for which he has trained, when he was doing a function he thought he should be doing, and when he was trained for a function he thought he should be doing.

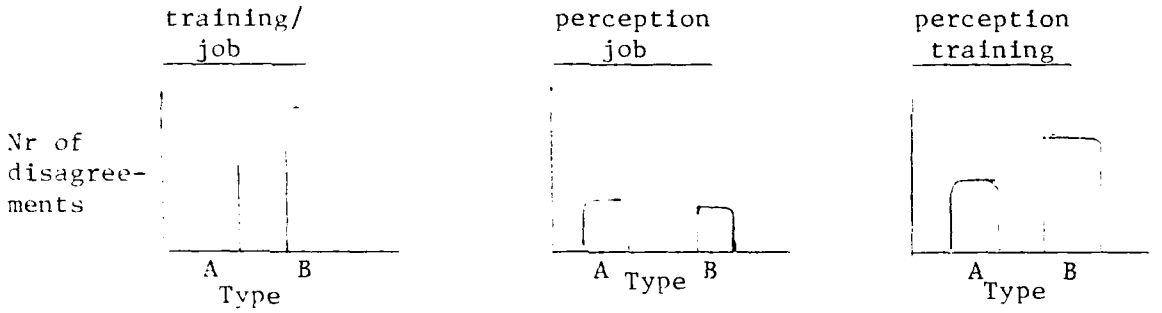
h. There was no disagreement when a PA was not doing a function for which he was not trained, when he was not doing a function he thought he should not be doing, and when he was not trained for a function he thought he should not be doing.

i. In general, type A differences indicated that there was a perception of too little training or under utilization and type B disagreements indicated that there seemed to be too much training or too much utilization.

11. A form shown at Appendix B was used to record the results of the analysis of the PA's responses.

12. For each category -- clinical, administrative, and managerial -- and each group of disagreements -- training/job, perception/job, and perception/training -- a graph was prepared to show the nature and extent of any differences. For example.

Clinical



13. Any individual duty, task, or responsibility with which five or more PA's had similar disagreements was identified and represented graphically also.

14. The results of the survey were analyzed and some possible explanations were developed along with some suggestions for further investigation.

15. The results of this research were presented to interested parties such as the PA Branch at the Academy of Health Sciences, some PA's and some supervisors of PA's so that they could be aware of the nature, if any, of differences in PA's perceptions, their training, and their utilization. Changes in PA's training or jobs may result.

Chapter II

DISCUSSION

Once the methodology was established, completing the research was simply a matter of following the given steps. All of the objectives of the research were accomplished as the steps in the methodology were accomplished. The data collection form was developed; the PA's were surveyed; discrepancies were resolved; and the data was analyzed and prepared for presentation.

Developing the Data Collection Form

In determining what duties, tasks, and responsibilities to include on the data collection form, all the available literature on the role and utilization of PA's was consulted along with the Program of Instruction for the Army's PA course and the Army Regulation 40-48, titled Nonphysician Health Care Providers. Some of the functions on the form were ones for which PA's were definitely trained and others were ones for which PA's had not been trained in the Army's two year PA course. Similarly, some functions were expected to be ones PA's performed and others were not expected to be identified as ones PA's normally did. There was no attempt made to include any certain number of functions which were expected to receive positive responses or ones expected to receive negative responses. The purpose of the research was not to compare PA's responses with those that could be expected but to determine what type and to what extent differences existed among the training, utilization, and perceptions of PA's. All that was required was a list of functions commonly associated in some way with Army PA's. There was also no effort made to achieve similar numbers of functions in each of the three categories - clinical, administrative, and managerial. Again because the purpose of the research was simply to

determine the nature of any differences among PA's training, utilization, and perceptions and not to make comparisons between categories, it was not necessary to have equal numbers of functions across the three categories. The issue was not whether there were more differences in the clinical functions or more in the administrative ones. The issue was within the category, to what extent did differences exist and what type were they. Were PA's undertrained, underutilized, overtrained, or overutilized, according to the reality of their training and their utilization and the subjective opinions of the PA's?

The statements which the PA's could select as appropriate for each duty, task, or responsibility are shown on the form in Appendix A. The only instruction to the PA's was to check as many statements as were appropriate. The senior PA and PA students who reviewed and tested the form had no problems with the instruction; but in the actual survey, several PA's only checked one statement per function. Only when two or more statements were checked could any differences be identified. Another unexpected result was that many PA's did not mark any of the statements which demonstrated their opinion on the appropriateness or desireability of performing the functions listed. The assumption was that if the opinion statements were not marked, there was no strong opinion. Possibly more preliminary testing of the form may have identified these problems and the instruction could have been modified to require a check in one of the other of the pairs of statements. This would have provided more data from which to draw conclusions on the nature and extent of any differences.

Because not every duty, task, or responsibility a PA may have was included on the data collection form, three questions were asked, which if answered positively, would provide more data on the nature of any differences. Without the questions, it would have been possible to overlook any differences simply because the function had not been included on the form.

The two final parts of the data collecting instrument were the section used to collect demographic data and the letter requesting the PA's participation. These are included in Appendix A. Some items of demographic data were used in making contacts for resolution of discrepancies among statements on the data collection form.

Surveying the PA's

During the period of the survey, there were 19 PA's on Fort Ord who were eligible to be surveyed. There were also two PA students and one PA who had specialized who were not eligible for participation because of the status of their training. Of the 19 PA's, one was not asked to participate because he was serving in a purely administrative capacity while awaiting a military court martial. Eighteen surveys were distributed and 15 were returned for a return rate of approximately 83%. The literature reports the percentage of returned questionnaires to be from about 50or 60 percent to much less than that. The high number of returned questionnaires in this Fort Ord research was the result of whenever possible, personal delivery of the survey and a request for the PA to complete it at the time of delivery. Some surveys were distributed through the Fort Ord distribution system and returned the same way. The three surveys which were not returned were three in which personal contact was not achieved. The surveys were distributed over a one month period; but because of PA participation in training exercises away from Fort Ord, it took over two months to collect the completed forms.

The respondents to the data collection form had between 1 and 11 years as PA's but only 2 PA's had greater than 5 years as a PA. All respondents were male and all except one were over the age of 30. Only two had fewer than ten years in the Army with most having greater than 15 years of service in Army. There were five different physician supervisors identified for the survey respondents.

Resolving the Discrepancies

The only cases in which the PA's had to be contacted after they returned their surveys were cases in which they checked only one response statement for a function. One PA did this throughout the survey and three other PA's only marked one response for each of the functions listed in the Administrative and Managerial categories. Other PA's had several functions on their surveys for which they checked only one response; but because these were isolated, the PA's were not contacted for more information. There were no discrepancies between the utilization and training the PA's reported and that reported by the supervisor and the training literature. The data collection forms as completed by the PA's accurately reflected their training and utilization.

Analyzing the Data

Appendix B shows the form on which the results of the surveys were recorded. For each of the fifteen returned surveys, each function was separately analyzed and any differences which were identified were recorded with a small mark in the appropriate column or columns of the row of that function. The determination of which type of difference existed is described in the introductory chapter of this paper in number ten of the methodology. After every function on all of the returned surveys was examined and the differences recorded, the results were tallied and transcribed to the form at Appendix C.

The results were more clearly seen through the use of histograms. These graphical representations of the data are shown below.

Clinical Category

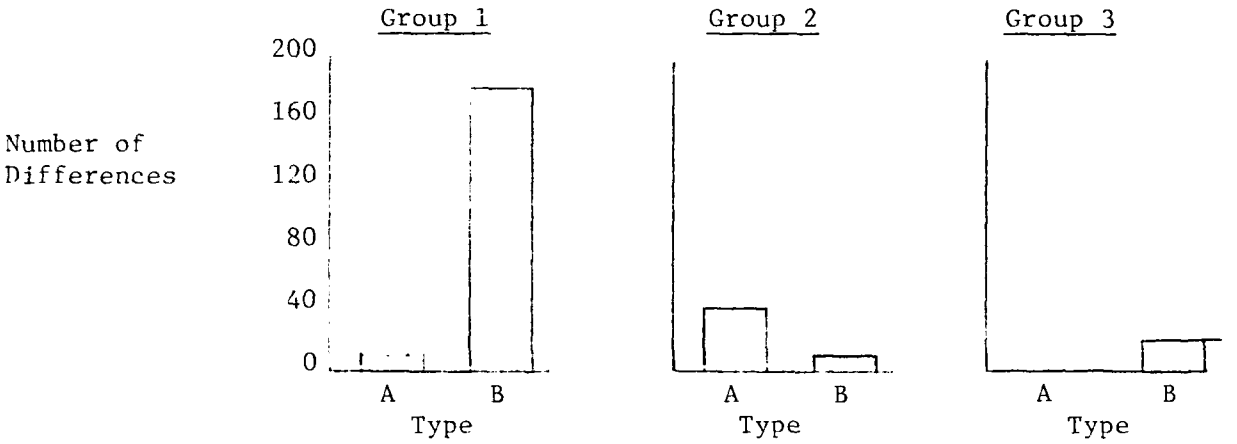


Figure 1

Managerial Category

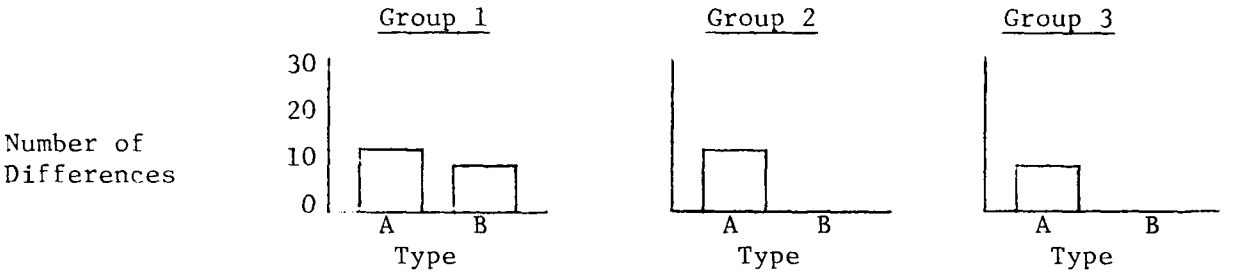


Figure 2

Administrative Category

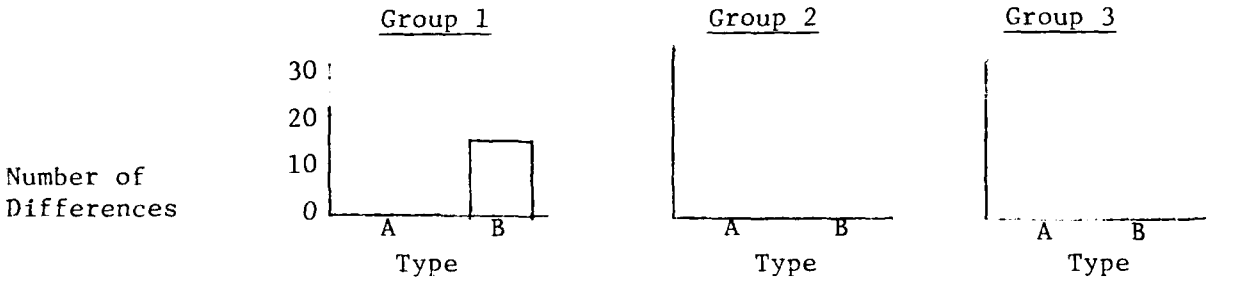


Figure 3

From looking at the numbers of differences of each type, it was evident that Type 1B, differences between training and utilization, were the most predominant type of difference, except in the managerial category. For the clinical and administrative functions listed, the greatest number of differences were ones in which the PA's were trained to perform a certain function but were not presently performing that function. The other two groups of differences were ones in which an opinion from the PA on whether he should, should not, or would like to perform a function was required. As mentioned earlier in this chapter, fewer PA's marked any of the perception statements than marked the training and utilization statements. This fact certainly affected the number of differences which could be detected between perception and utilization and perception and training. PA's who had not given an opinion were not later asked to do so; but in cases in which a PA had not indicated his training or utilization, a determination of whether he was or was not trained or did or did not perform the function was made based on the input from the PA, his supervisor, and the training literature. There were more opportunities to detect differences between training and utilization than to detect the other kinds of differences so it was not unusual that there were more differences of the types in group one than any of the other types.

Every PA marked some of the perception statements which is evidence that the assumption that if he did not mark a statement, he had no strong opinion was valid. When a PA marked a perception statement, it indicated a strong opinion; and if a difference resulted, it was an important difference to the PA. These cases will be identified later.

Observations in the Clinical Category

A closer look at the table in Appendix C and the histograms of the number of differences in each category showed some interesting findings. In the

clinical category, there were only four differences of type 1A which meant that PA's were doing functions for which they were not trained. Doing telephone screening and consultation was marked twice as a function a PA did without training, and diagnosing dental disease was the other function which generated two differences. Each PA's interpretation of what it meant to be trained and what diagnosing meant were factors in how the statements were marked for these two clinical functions.

As mentioned, in the clinical category the greatest number of differences recorded were of the type that meant PA's had been trained to do more than they were actually doing in their present jobs. The other type of difference which appeared a large number of times was type 2A. PA's thought they should be doing more than they were doing in their present jobs. Because perception statements were marked so infrequently, the ones that were marked and resulted in differences were considered important. The following list is a list of clinical functions in which the PA's most often felt underutilized:

writing doctor's orders for inpatients
dictating narrative summaries
doing urinary tract catheterization
prescribing birth control pills
prescribing narcotics
treating hypertension
delivering babies
treating post surgical cases
assisting in surgery
treating burn victims
counseling couples on family planning
doing gynecological exams
treating facial wounds

These functions have one of several things in common. Either they are procedures performed in an inpatient setting; they are procedures which must occur over a period of time greater than one patient visit; or they are functions which have been specifically reserved for other health care providers.

One other observation in the clinical category was interesting to note.

Only five times did the PA's indicate that they should not be performing a function which they were doing. Three of those times related to calipering soldiers for body fat content and two of the instances were telephone screening and consultation. The only response to the question at the end of the survey which asked if the PA's did any functions they thought were inappropriate for a PA was again calipering soldiers for body fat content. The PA who mentioned calipering as inappropriate did not think it was necessary to have an individual with the training and qualifications of a PA performing a function that did not require his expertise. PA's at Fort Ord were certified to perform calipering by a dietitian or a physical therapist from the MEDDAC and were required to devote one-half day each week to this function. Although possibly a routine procedure which anyone could do with enough practice, calipering is important because of its potential impact on the status of soldiers suspected of being overweight.

Observations in the Administrative Category

Appendix C and the histograms from the results of the analysis of differences in the administrative category showed that there was essentially only one type of difference in the training, perceptions, and utilization of PA's. Given the administrative functions on the data collection form, PA's were trained to do more than they were actually doing. Over 70 percent of the type 1B differences resulted from only two functions -- doing discharge planning for inpatients and making home visits to patients. These functions could have been classified into the clinical category because they certainly contained clinical components as well as administrative ones. The differences which arose over these two functions were certainly similar to the differences with the other clinical duties, tasks or responsibilities. The only strictly administrative function which a PA was doing without having

been trained was recording the minutes of meetings.

Although there were no other differences identified among the administrative functions, there was one other interesting observation which could not be shown on either the form at Appendix C or the histograms but which was very evident on the data collection forms themselves. The marking of perception statements was not a problem in this category. Over one-half of the PA's who returned surveys marked three harmonious statements. They said they did not perform, should not perform, and were never trained to perform certain functions. Not only were there no differences; there was a strong indication that the PA's were very confident about their role with respect to administrative functions. The functions which received the majority of the marks in the statements about how inappropriate that function was are listed below.

doing reports of survey
serving as property book officer
serving as motorpool supervisor
developing and controlling a budget

Maintaining an appointment system and advising the commander on the health status of the unit were two functions which were marked as very appropriate for a PA. Again, over one-half of the respondents marked should perform, do perform, and was trained to perform for these two functions. The survey forms left no doubt about the PA's role in certain administrative functions.

Observations in the Managerial Category

The managerial category was interesting because of the variety of differences reported. On ten occasions, PA's identified functions which they were performing but for which they had not been trained. Almost as many times, functions for which PA's had been trained but were not presently performing were identified. There were nine times when this type of difference was identified. In this category, there was also no lack of perception statements being marked;

but unlike in the administrative category, these perception statements did not show the clear agreement in training, utilization, and perception. The PA's indicated there were differences in how they thought they should be utilized and how they thought they should have been trained. Ten times PA's thought they should perform a function which they were not presently performing and five times they indicated they had not been trained for a function they thought they should do. Even though quite a few differences were discovered in this category, no function could be identified as the main source of disagreement. For all the different types of differences, there were only one or two PA's who shared the same disagreement about the same function. There were two exceptions. Three PA's said they were not trained to counsel soldiers on financial matters but were doing that; and four PA's said they were trained to serve as officer-in-charge of a health clinic but were not serving in that capacity. The functions listed in the managerial category were the type of functions for which the training, utilization, and perceptions of each PA could be expected to be very different. The variety of responses on the data collection form showed this to be true. There were no common practices concerning the training and utilization of PA's in the managerial functions and the opinions of individual PA's varied greatly.

Recognition of Individual Functions

There were some functions which deserved individual recognition because five or more PA's expressed similar differences with respect to training, utilization and perception. With the exception of two times, every time the situation occurred that there were five or more similar differences, the function was one from the clinical category and the difference was type 1B - the PA had been trained but was not presently performing the functions. The two exceptions were that five times PA's indicated they should be assisting in surgery but were not (a clinical function but type 2A difference) and five times PA's who were trained to make home visits to patients were not doing so (a type 1B difference but an administrative function). The clinical

functions which had five or more type 1B differences were as follows:

doing histories and physicals on inpatients	-1
writing doctors orders for inpatients	-2
doing urinary tract catheterization	-3
prescribing birth control pills	-4
treating victims of poisoning	-5
doing physical exams for nuclear surety	-6
prescribing narcotics	-7
treating hypertension	-8
counseling diabetic patients	-9
delivering babies	-10
treating post surgical cases	-11
counseling new parents on infant care	-12
assisting in surgery	-13
treating NBC casualties	-14
diagnosing dental disease	-15
counseling couples on family planning	-16
doing gynecological exams	-17
treating psychiatric disorders	-18

Two of these functions were not performed by PA's because patients of those types were not available. NBC casualties and victims of poisoning are not commonly seen and PA's do not have the opportunity to treat them. A histogram of the number of differences for each of the functions on the above list, except for treating NBC casualties and victims of poisoning is shown below. The numbers of the bars correspond to the numbers on the right of each clinical function.

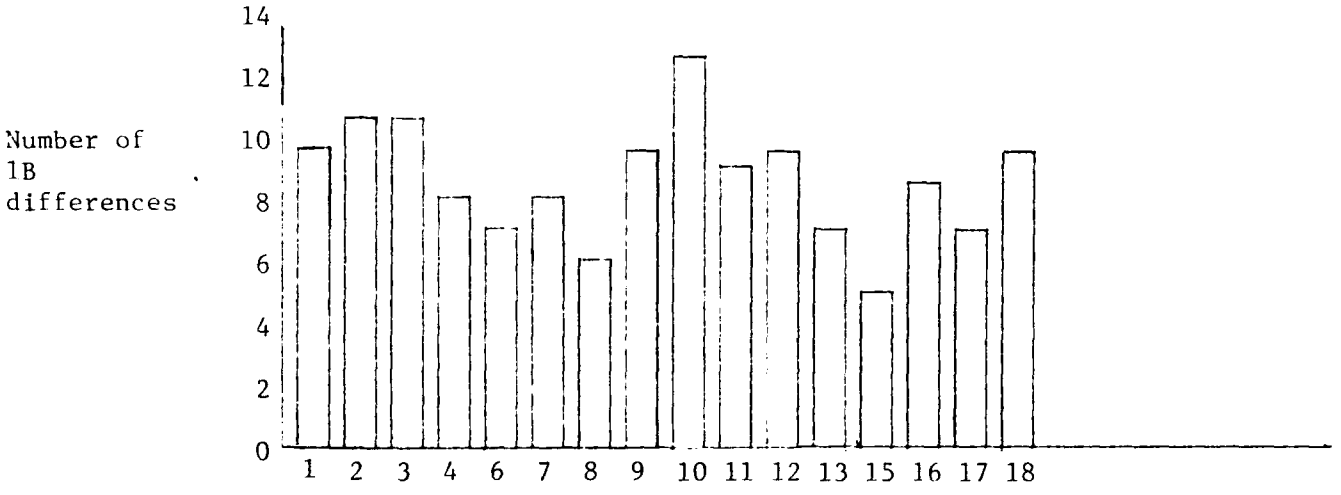


Figure 4

The functions with the greatest number of differences are functions which are not usually performed when the patient population is active duty soldiers who are seen in an outpatient setting for an acute problem that only requires one visit to the healthcare provider. PA's were exposed, though, to treatment of inpatients during their clinical practicums, but their mission is treatment of outpatients. These facts were the cause of the differences observed in the clinical category of functions.

Findings from the Questions

Eleven of the PA's who returned the surveys answered the questions on the data collection form. No one identified any areas in which he received too much training. Only one PA said he was performing an inappropriate function which was body fat calipering. All the PA's who answered identified functions in which they thought they had received too little training. The list of these functions follows.

Emergency tooth extraction and filling
Administrative functions
Treatment of orthopedic cases
Pediatrics
Geriatrics
Laboratory skills
X-ray interpretation
Performance of minor surgery

Except for pediatrics and geriatrics, the areas identified by the PA's as ones in which they received too little training are probably areas in which they are required to use their skills very frequently in the treatment of the soldiers in the 7th Infantry Division (Light). Their desire for more training probably comes from actual need.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The research on the PA's at Fort Ord demonstrated that differences do exist in how PA's are trained, how they are utilized, and how they think they should be trained and utilized. The nature and extent of these differences have been described in Chapter II. There are some general conclusions which can be drawn from the information and discussion presented in Chapter II.

With regards to the clinical functions, PA's were trained to perform more of these functions than they were actually doing in their present jobs. The functions they were not doing were functions which involved inpatients, treatment that required a longer period of time than one patient visit, or treatment that was reserved for the Obstetric/Gynecologic Nurse Practitioner. Some PA's felt strongly enough about some of these functions to identify them as ones they should be doing. Most of the clinical functions identified as ones PA's should be doing were functions that are not appropriate for the particular outpatient setting in which the PA's work. Only two functions were identified as ones PA's should not be doing and the PA's listed many functions for which they wished they had more training. Undoubtedly, with all that PA's do, all that they have been trained to do, and all that they desire to do, they are invaluable resources in the Army's healthcare system. Even though differences in the training, utilization, and perceptions of PA's concerning clinical functions were discovered, the differences did not seem to have a negative impact on the performance or attitudes of the surveyed PA's.

The administrative category was not important for the differences discovered there but rather for the similarities. PA's expressed complete agreement about

their training and utilization with respect to the administrative functions listed on the survey. When the decision was made to retain PA's as Warrant Officers rather than commissioning them, it was also decided that some of the extra administrative duties which commissioned officers perform, such as Surveying Officer for Reports of Survey, would not be required of PA's. The PA's demonstrated that they were very well aware of how they should perform administratively.

The managerial category showed many unrelated differences. The responses from individual PA's varied tremendously indicating that there is no uniform management training and no common expectations of the PA's concerning management functions.

Recommendations

This research served its purpose in determining the nature of differences in how PA's are utilized, what they were trained to do, and what they think they should be doing. To the extent that PA's in other Army healthcare organizations are utilized similarly to the PA's at Fort Ord, the conclusions and recommendations of this research are applicable to PA's in other locations. There are three recommendations which were derived from the results of this research.

1. It should continue to be taught from the first moment of PA training and reinforced throughout the PA's career that a PA's first mission is providing outpatient care to active duty soldiers. Research has shown repeatedly over the years that PA's desire to do more and expand their role so it is unlikely that Army PA's will ever be completely content with the functions they have been given. As long as they are completely aware of their primary mission, though, their desire to do more will not cause dissatisfaction.

2. PA's should have a viable, relevant continuing education program that addresses their needs for knowledge and skills. A PA's training should never end.

3. Because PA's are warrant officers in the Army, they are required to perform some management functions. The management training of PA's should be refined and the expectations of PA's as managers should be defined. Continuing education is one means for PA's to develop their management skills.

The results of this research did not suggest the need for further study. There was no evidence that any of the potential topics for further research mentioned in the introductory chapter would produce any significant findings if the PA's at Fort Ord were used as subjects. The differences that were discovered were not the cause of any dissatisfaction voiced by the PA's. The role and position of the PA was understood by the PA and his supervisor; he was not used inappropriately, except possibly for the calipering for body fat content. Finally, the research did indicate a need for some formalized management training. Although there were no startling findings, there were worthwhile findings that described the nature of the differences in the utilization, training, and perceptions of Army PA's.

FOOTNOTES

1. Bair, Jeffrey H. "Physician Extender." Journal of the Kansas Medical Society. December, 1980. p. 576.

2. Ibid. p. 576.

3. Schneller, Eugene Stuart. The Physician's Assistant. D.C. Health and Company, 1978. pp. 117-131.

4. Bliss, Ann A. and Eva D. Cohen. The New Health Professionals. Germantown, Maryland: Aspen Systems Corporation, 1977. pp. 195-200.

5. Coe, Rodney M. and Leonard Fitchenbaum. "Utilization of Physician Assistants: Some implications for Medical Practice." Medical Care. 10:497-503. November-December 1972. pp. 497-503.

6. Sadler, Alfred M., et.al. The Physician's Assistant-Today and Tomorrow. 2d ed. Cambridge, MA: Balinger Publishing Co., 1975. p. 148.

7. Bliss, Ann A. and Eva D. Cohen. The New Health Professionals. Germantown, Maryland: Aspen Systems Corporation, 1977. p. 192.

APPENDIX A

DATA COLLECTION FORM

DEPARTMENT OF THE ARMY
HEADQUARTERS U.S. ARMY MEDICAL DEPARTMENT ACTIVITY (MEDDAC) FORT ORD
FORT ORD, CALIFORNIA 93941-5800

REPLY TO ATTN OF

HSXT-AR

19 July 1985

SUBJECT: Participation in Research Project

All Physician Assistants
Fort Ord, CA 93941-5800

1. I am a student in the Army-Baylor Health Care Administration Program and have as one of my requirements for graduation the completion of a Graduate Research Project (GRP). The subject of my GRP is Physician Assistants (PA) and the specific question is to determine the nature of differences, if any, between what PA's think their jobs should be, what they have been trained for, and how they are actually being utilized in Army health care organizations.

2. At this time, I am only surveying PA's at Fort Ord and using this research to fulfill my academic requirement. I will provide a copy of my GRP to the PA Branch at the Academy of Health Sciences and copies to any of the surveyed PA's and commanders who desire one. Depending upon the outcome of this research, my GRP may lead to more extensive research, changes in the training of PA's or changes in PA utilization.

3. Attached to this letter is a survey listing many duties, tasks, or responsibilities you may have. I would truly appreciate your cooperation in completing this survey by checking as many of the statements as are appropriate for each duty, task, or responsibility listed.

4. Thank you very much for helping a struggling student finish her academic requirements and finally graduate!

Atch

Diane M. Flannery
DIANE M. FLANNERY
CPT, MS
Administrative Resident at
Silas B. Hays Army Community Hospital

Please provide the following information. Your name, unit, and phone number will only be used by me to reach you if I have any questions about your responses to the survey.

Name _____

Grade _____

Unit _____

Telephone Number _____

Name of Physician Supervisor _____

Total Years in Army _____

Years as a PA _____

Age _____

Sex _____

Type of PA Specialty Training, if any _____

MOS before becoming a PA _____

Time in Present Position _____

Time in Grade _____

QUESTIONNAIRE

Check as many statements as appropriate for each of the duties, tasks, or responsibilities listed.

Duty, Task or Responsibility	I perform this function in my present job	I do not perform this function at the present time	I should perform this function	I should not perform this function	I was trained to perform this function	I was never trained to perform this function	I would like to perform this function
Clinical							
do histories and physicals on inpat.							
do phone screening/consultation.							
write physical profiles.							
make referrals to specialty clinics.							
administer intramuscular medications							
do physical exams for flying duty.							
write doctor's orders for inpatients							
dictate narrative summaries.							
do physical exams for retirement.							
do urinary tract catheterization.							
administer local anesthesia.							
prescribe birth control pills.							
treat victims of poisoning.							
do physical exams for nuclear surety							
prescribe narcotics							
treat hypertension							
counsel diabetic patients							
order and read X-rays							
treat behavioral problems in children							
order lab tests							
deliver babies							
suture lacerations							
treat postsurgical cases							
identify public health issues							
counsel new parents on infant care and feeding							
do laboratory tests							
assist in surgery							
treat burn victims							
caliper soldiers for body fat content							
give immunizations							
treat NBC casualties							
diagnose dental disease							
put a cast on a patient							
recognize child abuse							
treat sexually transmitted diseases							
start IV's							
do minor surgery							
decide when to terminate treatment							
counsel couples on family planning							

Check as many statements as appropriate for each of the duties, tasks, or responsibilities listed.

Duty, Task or Responsibility	I perform this function in my present job	I do not perform this function at the present time	I should perform this function	I should not perform this function	I was trained to perform this function	I was never trained to perform this function	I would like to perform this function
Clinical (cont)							
do gynecological exams							
diagnose alcohol abuse							
diagnose drug abuse							
treat phychiatric disorders							
drape a minor sterile field							
treat facial wounds							
treat open fractures							
treat heat stroke							
make referrals to Pvnt Med Svc							
use occupational therapy with patients							
manage trauma cases							
manage wounds							
Administrative							
do Reports of Survey							
serve as Property Book Officer							
manage an appointment system							
serve as motor pool supervisor							
advise commander on health status of unit							
arrange transfer/evacuation of patients							
counsel soldiers on disability processing							
keep statistics on workload, etc.							
develop and control budget							
maintain sick call log							
record minutes of meetings							
serve as NBC officer							
do discharge planning for inpatients							
make home visits to patients							
Managerial							
assist in administration of UCMJ							
train medics in medical & soldier skills							
financial counseling of EM							
train nonmedical EM in soldier skills							

Check as many statements as appropriate for each of the duties, tasks, or responsibilities listed.

Duty, Task or Responsibility	I perform this function in my present job	I do not perform this function at the present time	I should perform this function	I should not perform this function	I was trained to perform this function	I was never trained to perform this function	I would like to perform this function
Managerial(cont)							
counsel soldier on performance							
plan medical support for FTX							
oversee field sanitation activities							
prepare EERs							
serve as OIC of a health clinic							
train soldiers in first aid							
train soldiers in injury prevention							
conduct meetings							
prepare soldiers for SQT							
counsel soldiers on oral health							
manage a continuing education program for PAs							

1. Are there any areas in which you think you received too little training? If yes, what areas? _____

2. Are there any areas in which you think you received too much training? If yes, what areas? _____

3. Do you perform any duties, tasks, or responsibilities which you think are inappropriate for a PA? If yes, what are they? _____

Use other side if necessary.

APPENDIX B

FORM USED TO RECORD SURVEY RESULTS

RECORD OF SURVEY RESULTS

Duty, Task, or Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/job TYPE A	GROUP 2 Perception/job TYPE B	GROUP 3 Perception/training TYPE A	GROUP 3 Perception/training TYPE B
Clinical						
do histories and physicals on inpat.						
do phone screening/consultation.						
write physical profiles.						
make referrals to specialty clinics.						
administer intramuscular medications						
do physical exams for flying duty.						
write doctor's orders for inpatients						
dictate narrative summaries.						
do physical exams for retirement.						
do urinary tract catheterization.						
administer local anesthesia.						
prescribe birth control pills.						
treat victims of poisoning.						
do physical exams for nuclear surety						
prescribe narcotics						
treat hypertension						
counsel diabetic patients						
order and read X-rays						
treat behavioral problems in children						
order lab tests						
deliver babies						
suture lacerations						
treat postsurgical cases						
identify public health issues						
counsel new parents on infant care and feeding						
do laboratory tests						
assist in surgery						
treat burn victims						
caliper soldiers for body fat content						
give immunizations						
treat NBC casualties						
diagnose dental disease						
put a cast on a patient						
recognize child abuse						
treat sexually transmitted diseases						
start IV's						
do minor surgery						
decide when to terminate treatment						
counsel couples on family planning						

RECORD OF SURVEY RESULTS

Duty, Task, Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/job TYPE A	GROUP 2 Perception/job TYPE B	GROUP 3 Perception/training TYPE A	GROUP 3 Perception/training TYPE B
Clinical (cont)						
do gynecological exams						
diagnose alcohol abuse						
diagnose drug abuse						
treat phychiatric disorders						
drape a minor sterile field						
treat facial wounds						
treat open fractures						
treat heat stroke						
make referrals to Pvnt Med Svc						
use occupational therapy with patients						
manage trauma cases						
manage wounds						
Administrative						
do Reports of Survey						
serve as Property Book Officer						
manage an appointment system						
serve as motor pooi supervisor						
advise commander on health status of unit						
arrange transfer/evacuation of patients						
counsel soldiers on disability processing						
keep statistics on workload, etc.						
develop and control budget						
maintain sick call log						
record minutes of meetings						
serve as NBC officer						
do discharge planning for inpatients						
make home visits to patients						
Managerial						
assist in administration of UCMJ						
train medics in medical & soldier skills						
financial counseling of EM						
train nonmedical EM in soldier skills						

RECORD OF SURVEY RESULTS

Duty, Task, or Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/ job TYPE A	GROUP 2 Perception/ job TYPE B	GROUP 3 Perception/ training TYPE A	GROUP 3 Perception/ training TYPE B
Managerial(cont)						
counsel soldier on performance						
plan medical support for FTX						
oversee field sanitation activities						
prepare EERs						
serve as OIC of a health clinic						
train soldiers in first aid						
train soldiers in injury prevention						
conduct meetings						
prepare soldiers for SQT						
counsel soldiers on oral health						
manage a continuing education program for PAs						

APPENDIX C

RESULTS OF PA'S SURVEY RESPONSES

RECORD OF SURVEY RESULTS

Duty, Task, or Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/job TYPE A	GROUP 2 Perception/job TYPE B	GROUP 3 Perception/training TYPE A	GROUP 3 Perception/training TYPE B
Clinical						
do histories and physicals on inpat.		10				
do phone screening/consultation.	2			2		
write physical profiles.						
make referrals to specialty clinics.						
administer intramuscular medications						
do physical exams for flying duty.						
write doctor's orders for inpatients		11	3			2
dictate narrative summaries.		4	2			2
do physical exams for retirement.						
do urinary tract catheterization.		11	2			
administer local anesthesia.						
prescribe birth control pills.		8	3			2
treat victims of poisoning.		5				
do physical exams for nuclear surety		7				
prescribe narcotics		8	3			
treat hypertension		6	3			
counsel diabetic patients		10	1			
order and read X-rays		2				
treat behavioral problems in children		2	1			
order lab tests						
deliver babies		13	3			
suture lacerations						
treat postsurgical cases		9	3			
identify public health issues		1	1			
counsel new parents on infant care and feeding		10	1			
do laboratory tests		4	1			1
assist in surgery		7	5			
treat burn victims			2			1
caliper soldiers for body fat content				3		
give immunizations						
treat NBC casualties		7				
diagnose dental disease	2	5				
put a cast on a patient		4				
recognize child abuse		4	1			
treat sexually transmitted diseases		4				
start IV's						
do minor surgery						
decide when to terminate treatment						
counsel couples on family planning		8	2			1

RECORD OF SURVEY RESULTS

Duty, Task, Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/job TYPE A	GROUP 2 Perception/job TYPE B	GROUP 3 Perception/training TYPE A	GROUP 3 Perception/training TYPE B
Clinical (cont)						
do gynecological exams		7	2			
diagnose alcohol abuse						
diagnose drug abuse		1				
treat phychiatric disorders		9	1			1
drape a minor sterile field						
treat facial wounds			2			
treat open fractures						1
treat heat stroke						
make referrals to Pvnt Med Svc						
use occupational therapy with patients		2				
manage trauma cases						
manage wounds						
Administrative						
do Reports of Survey						
serve as Property Book Officer						
manage an appointment system						
serve as motor pool supervisor						
advise commander on health status of unit						
arrange transfer/evacuation of patients						
counsel soldiers on disability processing						
keep statistics on workload, etc.						
develop and control budget		1				
maintain sick call log		1				
record minutes of meetings	1	1				
serve as NBC officer		1				
do discharge planning for inpatients		4				
make home visits to patients		5				
Managerial						
assist in administration of UCMJ		2				
train medics in medical & soldier skills						
financial counseling of EM	3					
train nonmedical EM in soldier skills	1					

RECORD OF SURVEY RESULTS

Duty, Task, or Responsibility	GROUP 1 Training/job TYPE A	GROUP 1 Training/job TYPE B	GROUP 2 Perception/ job TYPE A	GROUP 2 Perception/ job TYPE B	GROUP 3 Perception/ training TYPE A	GROUP 3 Perception/ training TYPE B
Managerial (cont)						
counsel soldier on performance		1	1			
plan medical support for FTX			1			
oversee field sanitation activities			1			
prepare EERs		2	1			
serve as OIC of a health clinic		4	2			
train soldiers in first aid						
train soldiers in injury prevention	1		1		1	
conduct meetings	1					
prepare soldiers for SQT	2		1		1	
counsel soldiers on oral health	1		1		2	
manage a continuing education program for PAs	1				1	

BIBLIOGRAPHY

Periodicals

Bair, Jeffrey H. "Physician Extender." Journal of the Kansas Medical Society. December, 1980. pp 574-76.

Carter, P.; Emelio, J.; Perry, H. "Enrollment and Demographic Characteristics of Physician's Assistant Students." Journal of Medical Education. 59(4):316-22. Apr 84.

Cawley, James F., John E. Ott, and Craig A. DeAtley. "The Future for Physician Assistants." Annals of Internal Medicine. 98:993-7. June 1983.

Coe, Rodney M. and Leonard Fitchenbaum. "Utilization of Physician Assistants: Some Implications for Medical Practice." Medical Care. 10:497-503. November-December 1972.

Fowkes, Virginia, et.al. "The Physician Assistants' Movement; Evolution and Issues." FCH/Primary Care at the Crossroads, 1980, pp 21-32.

Fowkes, Virginia; Hafferty, F.W.; Goldberg, H.I.; Garcia, R.D. "Educational Decentralization and Deployment of Physician's Assistants." Journal of Medical Education. 58(3):194-200. Mar 83.

Golden, A.S.; Cawley, James. "A National Survey of Performance Objectives of Physician's Assistant Training Programs." Journal of Medical Education. 58(5):418-24. May 1983.

Lave, Judith R., et.al. "The Physician's Assistant." Hospitals. 45:42-8. June 1, 1971.

Lewis, Charles E. "Acceptance of Physician's Assistants." Hospitals. 45:62-73. June 1, 1971.

Record, Jane Cassels, et.al. "New Health Professions After a Decade and a Half: Delegation, Productivity and Costs in Primary Care. "Journal of Health Politics, Policy and Law. 5:470-95. Fall 1980.

Roemer, Milton I. "Primary Care and Physician Extenders in Affluent Countries." International Journal of Health Services. 7:545-53. April 1977.

Rousselot, Louis M., et.al. "The Evolution of the Physician's Assistant: Brownian Movement or Coordinated Progress." Bulletin of the New York Academy of Medicine. 47:1473-98. December 1981.

Stuart, Richard B., et.al. "The Training and Role of Physicians' Assistants in the Army Medical Department." Military Medicine. April 1973, pp 227-9.

_____. "Using 'extenders' vs sharing your practice." Patient Care. August 15, 1982, pp 311-7.

Weston, Jerry L. "Distribution of Nurse Practicioners and Physician Assistants: Implication of Legal Constraints and Reimbursement." Public Health Reports. 9:253-8. May-June 1980.

Yankauer, Alfred and Jidith Sullivan. "The New Health Professionals: Three Examples." Annual Reviews Public Health. 3:249-76. 1982.

Reisz, W.G.; Cawley, J. F.; Barry, W.S. "The Current Status of Physician Assistants." Maryland State Medical Journal. 33(4):288-91. Apr 1984.

Books

Bliss, Ann A. and Eva D. Cohen. The New Health Professionals. Germantown, Maryland: Aspen Systems Corporation, 1977.

Sadler, Alfred M., et.al. The Physician's Assistant-Today and Tomorrow. 2d ed. Cambridge, MA: Balinger Publishing Co., 1975.

Schneller, Eugene Stuart. The Physician's Assistant. D.C. Health and Company, 1978.

Newspapers

Jenkins, D.H. "Army's PA Program One of Nation's Finest." Patriot. January 11, 1983, p. 6.

Government Documents

U. S. Department of the Army, Washington, D.C., Military Physician Assistant (PA) Procurement Program, Fiscal Year 1984-1985, Department of the Army Circular 601-84-1, Washington: Government Printing Office, February 15, 1984.

U. S. Army Health Services Command. Military Physicians' Assistant, HSC PAM 40-7-7. August 1982.

Unpublished Sources

Survey of Physician Assistants Soldierly Skills. Directorate of Evaluation and Standardization, Academy of Health Sciences, Fort Sam Houston, TX, April 1984.