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**U.S. AIR FORCE NURSES ASSIGNED TO OUTPATIENT CLINICS: PERCEIVED
CLINICAL COMPETENCE IN CONTINGENCY OPERATIONS**

by
Mary F. Hornback

A thesis submitted to the School of Nursing
and The Graduate School of The University of Wyoming
in partial fulfillment of the requirements
for the degree of

**MASTER OF SCIENCE
In
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The purpose of this study was to discover how active duty Air Force (AF) nurses assigned to outpatient clinics perceived their clinical competence to practice in contingency operations, and to discover if perceptions of current training were related to perceptions of competence. A sample of 273 nurses (54.9% response rate) participated in a web-based survey. Perceptions of clinical competence were measured using responses to the AF Clinical Competency Measurement Model. Four Likert scale items measured attitudes towards current training. Responses revealed that 81.7% of the sample perceived themselves as less than highly competent. Unfavorable attitudes towards training were pervasive, and there was not much of a relationship between perceptions towards training programs and perceptions of competence. Comments were added to 96 surveys. Themes that emerged in the qualitative analysis include: (a) deficient clinical skills, (b) unpreparedness for deployment, (c) competence related to acute care experience, and (d) job dissatisfaction. Findings suggest that most AF nurses who are assigned to outpatient clinics do not possess the perceived level of competence required in a deployed setting. Current skills training does not provide the practical knowledge required for developing or maintaining clinical expertise. Skills training for AF nurses who are assigned to outpatient clinics should routinely incorporate acute care practice opportunities.

To The Graduate School:

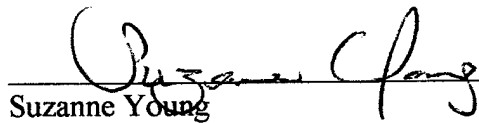
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Mary E. Stepanos, Chairperson

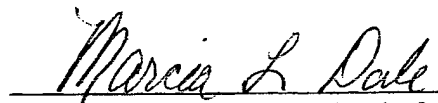


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Table of Contents

<i>Chapter</i>	<i>Page</i>
I. INTRODUCTION.....	1
Research Questions.....	3
Definition of Terms.....	3
Summary.....	4
II. LITERATURE REVIEW.....	5
Introduction.....	5
The Background.....	5
Current Training.....	8
Related Literature.....	9
Summary.....	13
III. METHODOLOGY.....	14
Introduction.....	14
Sample and Data Collection Procedures.....	14
Setting.....	15
Instrumentation and Analysis.....	15
Perception of competence.....	16
Perception of training.....	17
Additional comments.....	17
Validity and Reliability.....	17
Clinical Competency Measurement Model.....	17
Web-based survey.....	18
Protection of Human Rights.....	19
Limitations.....	19
Summary.....	22
IV. RESULTS.....	23
Introduction.....	23
Response Rate and Sample Characteristics.....	23
Research Question 1.....	27
Research Question 2.....	30

Perceptions of Current Training.....	30
Relationship between Perceptions of Training and Perceptions of Competence.....	33
Unanticipated Findings.....	33
Deficient Clinical Skills.....	34
Unpreparedness for Deployment.....	35
Current Clinical Competence.....	38
Job Dissatisfaction.....	38
Summary.....	40
V. DISCUSSION.....	41
Introduction.....	41
Sample Characteristics.....	41
Clinical Competence.....	42
Skills Training.....	45
Recommendations for Practice.....	49
Summary.....	52

List of Tables

	<i>Page</i>
Table 1.	Rank and Education Characteristics of Sample 24
Table 2.	Descriptive Statistics of Years RN Experience 25
Table 3.	Descriptive Statistics for AFSC and Current Assignment..... 26
Table 4.	Perceived Levels of Clinical Competency..... 28
Table 5.	Mean Attitudes Towards Training..... 31
Table 6.	Frequency Table of Attitudes Towards Training..... 32
Table 7.	Correlation Between Perceptions of Clinical Competence and Perceptions of Training..... 33

List of Figures

	<i>Page</i>
Figure 1. Mean Competency Scores.....	28
Figure 2. Distribution of Average Competency Scores.....	29

Chapter I

Introduction

The first mission of the United States Air Force (USAF) Medical Service is to “expand, mobilize, and deploy medical support for contingency operations worldwide” (USAF Medical Service Homepage, 2002). *Air Force (AF) Doctrine Document 2-4.2* (2002) reinforces this premise by stating that medical readiness is the primary role and relevancy of the USAF Medical Service. The USAF Nurse Corps is a critical component of the USAF Medical Service and deploys in support of U.S. warfighters. Historically, military hospitals offered excellent training grounds for active duty nurses to learn, hone, and maintain clinical competency skills necessary to care for the acutely injured. However, Department of Defense (DoD) Hospitals no longer support the large number of inpatients they once did more than a decade ago. Numerous DoD hospitals have permanently closed (Bailey, 1997; Dao, 2001; Glover, 1998). Others have converted to outpatient clinics where the focus is on preventive and ambulatory patient care. Consequently, an alarming gap continues to widen between military nursing during peacetime, and military nursing during contingency operations. USAF active duty nurses have few opportunities to learn or maintain the most fundamental clinical skills expected in a deployed environment, especially those assigned to outpatient clinics. In these uncertain times, it could be devastating to the military mission if nurses are deployed feeling clinically unprepared to care for acutely ill or injured casualties.

Although no prior studies have specifically targeted the clinical competence of active duty nurses assigned to outpatient clinics, a phenomenological study conducted with Vietnam War nurses highlighted the need for solid clinical experience prior to deployment (Scannell-Desch & Anderson, 2000). And, as recently as 1996, 1998 and 2000, studies were conducted to develop and test instruments for assessing the military nurse's perceived readiness to deploy in both the Army and the Air Force (Dremsa-Collins, 2001; Reineck, 1999; Reineck, 2001). The aim of this study was to specifically assess the perceived clinical competence of USAF nurses who have the least opportunities to hone clinical skills: those nurses who may be dependent upon their individual facility's skills training programs to develop and/or maintain clinical competence.

The purpose of this study was to discover how USAF nurses assigned to outpatient clinics perceived their clinical competence to practice in contingency operations, as well as to discover if perceptions of current training were related to perceptions of competence. Theoretically, for nurses who have little opportunity to practice hands-on skills in their day-to-day jobs, high self-ratings of clinical competency would reflect that gaps between peacetime nursing and nursing during contingency operations are being sufficiently and effectively addressed through other channels, such as clinical warskills training. Conversely, low self-ratings of clinical competency would suggest that these gaps are not being addressed, and that perhaps current training needs to be reexamined and aggressively modified.

Research Questions

1. How do USAF nurses assigned to outpatient clinics perceive their clinical competence to perform in contingency operations?
2. What is the relationship between perceptions of current skills training programs and perceptions of clinical competence?

Definition of Terms

The following military terms and acronyms will be used in this paper:

1. Contingency operations: A planned response to both Military Operations Other Than War (MOOTW) and war. This usually involves deployment but could also refer to a homeland response in treating and caring for mass casualties.
2. Medical readiness: The state of being prepared to perform the primary military medical mission in support of U.S. warfighters.
3. Military Operations Other than War (MOOTW): As defined by "Basic AF Doctrine," (1997) these activities focus on deterring war, resolving conflict, promoting peace, and supporting civil authorities in response to domestic crises. These operations may or may not involve combat.
4. Readiness Skills Verification Program (RSVP): An AF training program that provides guidance to medical facilities on how to ensure nurses are current in critical deployment knowledge and skills by the accomplishment of various skills checklists.
5. Primary Care Optimization (PCO): A new health delivery model implemented in 2000 and 2001 that focuses on personalized primary preventative health care for an empanelled population of beneficiaries delivered by a specific provider and a support team of nurses and medical technicians.

6. Warskills: Mission-essential tasks performed in a deployed setting (HQ USAF/SGXW WAR-MED Planning System Office, 1999). RSVP checklists reflect these key readiness skills required by nurses.

Summary

Active duty USAF nurses assigned to the outpatient setting have limited opportunities to develop and/or maintain clinical competency skills. It could be devastating to the military mission if nurses are deployed feeling inadequately trained to care for acutely ill or injured casualties. The focus of this study was to discover how these nurses perceived their clinical competence to practice in a deployed setting, as well as to discover how perceptions of current training programs related to self-rated clinical competence.

Chapter II

Literature Review

Introduction

This literature review presents the background of the problem, current training, and related literature. The background describes the political events that have shaped the current readiness status of the USAF Nurse Corps. Current training is briefly discussed. Related literature addresses the concept of competence and how this relates to the military nurse.

The Background

According to the National Defense Panel's Strategic Assessment (1999), "the world is becoming murkier and more dangerous" (p.59). This was never more evident to our country than on September 11, 2001. Owing much to the dissolution of the Soviet Union, many rogue states and terrorist groups have emerged, and threats to U.S. national interests continue to escalate daily. Terrorism, weapons of mass destruction, unstable governments, ethnic cleansings, and prospects of war demand the military's forward presence in multiple worldwide operations. Currently, the news is riddled with feature stories of U.S. troops deployed to Afghanistan and Persian Gulf countries. U.S. troops are also deployed to Diego Garcia, the Balkans, and lesser-publicized areas that require humanitarian support.

Despite the increased need for military personnel and a forward military presence, political events over the last decade have led to closures of numerous bases worldwide, and reductions in active duty personnel. Ironically, one month prior to the September 11th disaster, the Pentagon announced plans to close a significant portion of the remaining military bases. Ninety-seven bases had already closed in the decade prior to this announcement (Dao, 2001). And in a plan initiated in 1997, the AF slashed medical service personnel by 17.9 percent (Bailey, 1997). Consequently, increased military operations overseas and decreased medical service personnel to support these operations, have resulted in a much higher probability that all active duty personnel, including nurses, will deploy in support of MOOTW or war. These nurses may be challenged with caring for the critically ill and critically injured, as well as managing mass casualty situations.

In 1997 the AF Chief Nurse, Brigadier General Linda Stierle wrote, "It is medical readiness which sets military nursing apart from civilian nursing. We must be ready, willing and able to respond anywhere, anytime in support of our national security" (p.3). Perhaps the greatest hindrance to medical readiness and clinical competence for USAF nurses has been the arrival of military managed care. In an effort to save government dollars, health care for military beneficiaries was outsourced to civilian agencies beginning in 1996. As a result numerous DoD hospitals closed inpatient services and converted to ambulatory clinics, and peacetime military nursing shifted away from the bedside to the outpatient arena. Currently 50 of the 74 remaining AF medical treatment facilities are outpatient clinics only (Brannon, 2002, May).

In the years 2000 and 2001, Primary Care Optimization (PCO) was born. This model of primary health care delivery reshaped the USAF nurses' peacetime role, focusing on telephone triage and health education. In her 2001 presentation to the U.S. Senate Committee on Appropriations, current Director of Nursing Services, Brigadier General Brannon reported that AF nurses in outpatient clinics spend up to 60 percent of their duty time providing telephone support to patients. This is a far cry from the 1980s and early 1990s when AF nurses kept their clinical skills sharp by overseeing care of 20 to 30 medical-surgical patients each on busy inpatient units.

Prior to the conversion of the Ellsworth Air Force Base, South Dakota, hospital to an outpatient care-only facility, 28th Medical Group Commander, Colonel Farley Howell voiced his concern about the impact on readiness, stating:

...inpatient support staff need to be in a setting where they're exercising their skills daily and constantly being challenged. So, when they do go to a war zone to take care of heavily traumatized soldiers, their skills are going to be finely tuned to effectively meet their mission (Gaddy, 1999, ¶ 10).

In addition to military managed care, a second factor that may further hinder clinical competence was recent changes in commissioning policy. Previous policy dictated that 75% of nurses recruited must be "fully qualified". To be considered fully qualified nurses were required to have at least one year of inpatient acute care experience. However, because of recruiting short falls, the operational definition of fully qualified was changed in 2000 to include nurses with only one year of outpatient experience. Inpatient nursing experience was no longer required (Brannon, 2001). The definition was

again changed in 2002 to include nurses with only six months experience (Brannon, 2002, May).

Current Training

Clinical competencies are the skill sets required by nurses in clinical practice. “Competencies reflect the proficiencies needed to perform a particular task or carry out their defined role in the health care setting” (Oermann & Gaberson, 1998, p.175). Typically each competency is defined by established criteria that determine achievement of the skill set. To ensure competence of nurse employees, skill sets are routinely evaluated within established timeframes.

The Readiness Skills Verification Program (RSVP) Implementation Guide (2002) defines the required competencies for the USAF nurses’ medical readiness mission. The RSVP provides checklists of required skills based on the AF Medical Service’s readiness missions, including war operations, humanitarian and civic assistance operations, and disaster responses. Twelve nursing checklists have been constructed and are specific to the nurse’s primary specialty or Air Force Specialty Code (AFSC). For example, the large majority of nurses have the primary AFSC of a general clinical nurse. The RSVP checklist for the general clinical nurse has slightly different core skill requirements than those required of the critical care nurse. Implementation, maintenance and validation of these checklists are the responsibility of the individual facilities and the facility’s Chief Nurse. The *RSVP Implementation Guide (2002)* is the accompanying manual available to every AF medical treatment facility. This reference guide introduces the facility to the basics of RSVP training. It makes the following statement regarding the accomplishment of successful training, “Be innovative in planning training opportunities: simulation

labs, clinical sites with other services/agencies, ... training programs, distance learning opportunities ” (p.4).

In an effort to provide RSVP training opportunities, the Air Force recently implemented two new programs, C-STAR and TopSTAR. C-STAR (Center for Sustainment of Trauma and Readiness Skills) provides select active duty nurses who are assigned to the specialized critical care air transport team, with approximately 56 hours of hands-on refresher training in surgical intensive care units. Hospitals that participated last year included the University Hospital of Cincinnati and the University of Maryland Medical Center (McNeill, Gablehouse, Roberts, & Quintanilla, 2002). C-STAR was initiated in January of 2002. It was estimated that approximately 38 active duty nurses completed the program since initiation. (B. Davis, personal communication, January 6, 2003).

The second program TopSTAR or Top Sustainment Training to Advance Readiness, was developed as a skills refresher class for nurses and technicians (Sabido, 2002). It is a two-week long training program with the first week consisting of didactic training and simulated labs. This is followed by four full days of hands-on patient care in the inpatient setting. It is designed to provide 100% of all of RSVP training. Graduates are considered sustainment qualified in all required warskills for a two-year period. Eighteen active duty nurses completed TopSTAR last year at Travis AFB Medical Center (J. M. Sabido, personal communication, January 6, 2003).

Related Literature

The National Council of State Boards of Nursing (1996) defined competence as “the application of knowledge and the interpersonal, decision-making and psychomotor

skills expected for the practice role, within the context of public health, safety and welfare” (p.5). Abruzzese (1996) described the competent nurse as one who possessed the correct knowledge and skills. She emphasized that productivity is essential, and that practice is a necessary component of competence. In Dreyfus and Dreyfus’s (1996) model of skill acquisition for nurses, they argue that a competent level of nursing performance cannot be reached with theory alone and that practice is essential to success. Finally, in her article on promoting continued competence, Waddell (2001) stated, “Nurses who are competent in one setting may be incompetent in another” (p.6). She also pointed out that nurses should systematically perform self-assessments in an effort to identify deficiencies in their practice. Furthermore, Waddell emphasized that this self-assessment supported the concept of professional accountability for maintaining continued competence.

There is a dearth of literature related to military nurses and competence. However, Scannell-Desch and Anderson (2000) conducted a phenomenological study with 24 military nurses who served during the Vietnam War. Eight hardships and nine personal strategy themes were identified in the study. Themes that emerged that are significant to this study included the finding that nurses assigned to Vietnam felt overwhelmed by the numbers of casualties and severity of injuries encountered. Clinical inexperience was also identified as a major hardship. Nurses defined clinical inexperience as having two years or less experience prior to deployment. Nurses, who had two years or less clinical experience prior to deployment to Vietnam, stated that they were ill-prepared to deal with the types of injuries and volumes of patients that they

received. Lack of experience contributed to feelings of insecurity and fear of making a mistake that could harm the patient.

Scannell-Desch and Anderson (2000) concluded, "This finding illuminated the need for nurses to have solid clinical experience credentials, including trauma skills, prior to being deployed to a war zone" (Discussion section, ¶ 2). A second phenomenological study, conducted with 340 military nurses who served in actual combat zones or near the front line during WWII, Korea, Vietnam, or Operation Desert Storm, revealed that nurses ranked clinical skills highest in terms of priority for prewar training (Stanton-Bandiero, 1998).

The need for clinical nursing competency was also emphasized in a study conducted by an Army nurse (Reineck, 1999). A qualitative research approach was used to define concepts of individual medical readiness specific to nurses in deployed environments. Focus groups were composed of Army nurses with a broad range of deployment experience. Six essential components of readiness were identified and defined: (a) clinical nursing competency, (b) operational competency, (c) survival skills, (d) leadership skills, (e) physical/psychosocial readiness, and (f) group integration. Focus group members emphasized that out of all of these dimensions, clinical nursing competency was by far the most important component of readiness for deployment.

Utilizing these six essential components and other ideas generated by focus groups, Reineck (2001) continued with her work by constructing and evaluating psychometric properties of an instrument developed to estimate U.S. Army nurses' perceived individual readiness to deploy. This instrument called the Readiness Estimate and Deployability Index (READI) was made up of six subscales each representing a

component of medical readiness that had been identified in her previous qualitative research. The instrument proved to be reliable and valid and was used to assess the readiness of Army nurses who were to deploy to Bosnia and Kosovo.

In 2001 an AF nurse adapted the READI for USAF nurses (Dremsa-Collins, 2001). Because the mission of the U.S. Army is different from the mission of the USAF, the tool required modification to enhance relevance for the AF nurse. Through a series of tests and revisions, the Army tool was adapted to measure the AF nurse's perceived readiness for deployment. This new instrument, called the Readiness Estimate and Deployability Index Revised for Air Force Nurses Short Form (READI-R-AFN [SF]), proved to be a valuable tool in assessing the AF nurses' perceived readiness for deployment. It too was composed of the six components of individual readiness previously identified in Rieneck's qualitative research (1999). The READI-R-AFN [SF] measured these six components using separate subscales. The subscale that measured clinical competency was adapted from the Army tool through item correlation and goodness of fit statistics (Dremsa-Collins, 2001). Validity and reliability for the READI-R-AFN [SF] will be further discussed in Chapter III, Methodology. The Clinical Competency Measurement Model for AF nurses included 10 items:

1. Competent as a nurse in a mass casualty situation
2. Performance in emergency situations, such as in a cardiac arrest.
3. Taking care of life threatening injuries.
4. Providing nursing care to multiple trauma patients.
5. Caring for patients with ballistic missile injuries.
6. Recognition of a patient with tension pneumothorax.

7. Performing fluid resuscitation of burn patients.
8. Performing resuscitation with blood products.
9. Performing airway management.
10. Implementing the triage categories.

Summary

An unstable world climate and a heightened probability of deployment for active duty USAF nurses necessitates an increased urgency for nurses to feel clinically competent to practice in various deployed settings. Clinical competency is recognized as the most critical component of the military nurse's individual medical readiness, and is attained through practice and productivity. Political and economic events continue to shape a USAF Nurse Corps with less acute care experience and fewer opportunities to practice essential medical readiness skills. Although efforts have been made to develop training programs to facilitate completion of RSVP checklists, competence consists of possessing knowledge, critical thinking, and psychomotor skills that can not be reached with theory alone but through context-specific practice. Without practice, it may be unrealistic to believe that this level of competence can be attained through current methods of skills training employed by individual facilities and/or other episodic AF training programs. The Clinical Competency Measurement Model was used to shed light on the nurse's perception of competence.

Chapter III

Methodology

Introduction

A sample of active duty USAF nurses participated in a web-based survey. The purpose was to gather data on perceptions of clinical competence, and to explore the relationship between perceptions of current skills training programs and perceptions of clinical competence. This chapter will address methods used to answer the research questions. It will include information related to sampling and data collection procedures, the setting, instrumentation and analysis, validity and reliability, protection of human rights, and limitations.

Sampling and Data Collection Procedures

Chief nurses from 59 different AF medical facilities were contacted via e-mail to request participation of their outpatient nursing staff in a web-based survey (see Appendix A). Forty-three of these senior nurses responded positively and agreed to distribute the e-mail introductory letter to their staff nurses who met sampling criteria. This introductory letter explained the purpose of the study, criteria for participation, and risks and benefits. Staff nurses who chose to participate linked directly to the survey WebPage from the URL address contained in the letter. Submitted survey responses were then transferred to an Access database managed by the webmaster. Responses could not be linked to a name or facility.

Individual participation criteria included the following:

1. USAF nurses who had been on active duty as a nurse for at least one year
2. Currently assigned and having completed at least one consecutive year in an outpatient clinic, including non-acute care positions such as staff development, infection control, utilization management, population health, or administrative positions
3. Rank of Second Lieutenant through Major (O-1 to O-4)
4. Consent to participate

Participants included in the final analysis met all of these criteria. Two participants worked in emergency rooms (ER). Although ERs treat a higher level of acuity than other ambulatory services, USAF ERs often function as acute care clinics. For this reason responses from these two nurses were also included in the analyses.

Setting

Nurses who participated in the study represented 43 different AF medical facilities worldwide. Thirty-five of these facilities are located in the continental U.S. and include: (a) hospitals that have inpatient and outpatient services, (b) large clinics that provide a plethora of ambulatory services including same day surgery, and (c) small clinics that provide primary care only. Nurses from eight overseas medical facilities also participated. Four of these are located in Europe and four in Pacific Asia. These 43 facilities represent the diversity in both location and size present among the remaining AF medical facilities worldwide.

Instrumentation and Analysis

An Air Force approved web-based survey was developed to conduct a 31-item structured self-report questionnaire. The first 10 questions addressed perceptions of

clinical competence using the Clinical Competency Measurement Model. These were followed by four Likert scale items that measured attitudes towards current skills training. Drop-down menus facilitated answering the first fourteen questions. These were followed by 17 demographic questions and a final open section merely prompted by “comments.”

Perception of competence. Five graded alternatives were available to the respondent to categorize their level of competence in the first 10 multiple-choice questions. Definitions of the competency scale were included for reference on the survey (See Appendix D). A self-rating of “1” meant the person perceived themselves as not competent. Not competent was defined as requiring theory, demonstration and supervised practice. A self-rating of “2” meant the person perceived themselves as minimally competent. Minimally competent was defined as requiring review and supervised practice. A self-rating of “3” meant the person perceived themselves as moderately competent. This was defined as needing some review and little supervision. A self-rating of “4” meant the person perceived themselves as highly competent. Highly competent was defined as needing review only. The highest self-rating of “5” meant the person perceived themselves as totally competent. This was defined as needing no review or supervision. Scoring was accomplished using an ordinal scale from one to five.

Simple descriptive statistics of means and standard deviation were used to analyze the competency scores for the sample ($n = 273$) on each of 10 skills. Frequency tables were utilized to analyze individual averages for all 10 items. Naturally, the highest average a respondent could rate themselves on all 10 skills was a “5”. This indicated that the nurse felt totally competent in all 10 competency categories. The lowest score a

respondent could average was a “1”. This meant that the nurse felt no competence in all 10 categories.

Perception of training. A five-level Likert scale was used to measure attitudes toward the four training items. A rating of “1” meant the respondent totally disagreed with the statement. A rating of “2” meant the respondent disagreed. A “3” meant the respondent neither agreed nor disagreed. A “4” meant the respondent agreed, and a “5” meant the respondent totally agreed with the statement. Scoring was also accomplished using an ordinal scale from one to five. Since all four statements were positively worded, higher ratings of agreement reflected positive attitudes towards training. Lower ratings of agreement reflected negative attitudes towards training. Descriptive statistics of means and standard deviation were used to analyze the groups’ attitudes. Pearson’s *r* correlation co-efficient was then computed to determine the extent of relationships between attitudes related to training and self-rated competency scores.

Additional comments. An optional comment section was added to the questionnaire to enhance findings. Respondents were not given any guidance on what to discuss in this open section as would be expected in a traditional written method of qualitative data collection (Morse & Field, 1995). The abundant return on comments necessitated some form of conceptual ordering to make sense of this unexpected voluminous data. Principles of thematic analysis were used to search for and identify common threads.

Validity and Reliability

Clinical Competency Measurement Model. The Clinical Competency Measurement Model was used to measure perceptions of clinical competence. It is but

one subscale of the much larger instrument known as the READI-R-AFN [SF] that was designed to measure the AF nurse's perceived readiness for military deployments. The entire READI-R-AFN underwent extensive testing for reliability and validity in both a pilot study of nurses (n=181) and a field study (n=205). Reliability was established through testing for internal consistency using Cronbach's Alpha (Dremsa-Collins, 2001). Results revealed a high level of internal consistency for the Clinical Competency Measurement Model ($\alpha = 0.94$). Content validity for the entire READI-R-AFN was established with the assistance of nurses experienced in AF deployment missions (Dremsa, 2002). Construct validity for the Clinical Competency Measurement Model was established through confirmatory factor analysis. Factor loading results for the 10 items ranged from 0.68 to 0.87 and indicated good correlation between individual variables and the underlying dimension within each clinical competency item (Dremsa-Collins, 2001).

Web-based survey. The first 10 questions of this survey were replicated from the Clinical Competency Measurement Model of the READI-R-AFN [SF]. Reliability through confirmation of internal consistency was repeated on these 10 questions, and yielded an alpha coefficient of 0.92. The researcher designed the next four Likert items for the survey, as well as demographic questions. Four field grade officers reviewed the survey for clarity and relevance, including Lt Col Dremsa who designed and conducted studies on the READI-R-AFN [SF]. Internal consistency testing on the four training items yielded an alpha coefficient of 0.73. When the first training item (see Appendix D, question 11) was eliminated from the reliability analysis, the alpha coefficient increased

to 0.80, indicating greater internal consistency among the last three Likert scale items (questions 12, 13, and 14).

The credibility of thematic analysis derived from submitted comments is supported by the quantitative findings. While these qualitative data were not obtained using a traditional unstructured questionnaire, results do shed light on the quantitative findings.

Protection of Human Rights

The University of Wyoming Institutional Review Board approved this survey procedure. Since participants were at least 18 years of age and the survey was anonymous, it was exempt from formal review for projects involving human subjects (Appendix B). The survey process and tool also obtained official approval from Head Quarters Air Force Personnel Center (Appendix C).

The introductory letter to the study advised that risks to participation were minimal. Participants were assured of complete anonymity, and were informed that survey responses were transferred to a database that could not be linked to a name or a facility. Benefits to participating included contributing to the growing body of knowledge on military nurses and their preparedness for deployment. Participants were also informed that results could influence future methods of skills training for outpatient USAF nurses. Consent to participate was assumed by the voluntary completion of the survey.

Limitations

Limitations of this study are primarily related to the design of the survey tool. Question 18 was written with the intent of obtaining information regarding years that had

passed since the respondent had last worked in a high acuity setting (see Appendix D). It was not discovered until the analysis process that if the respondent had answered zero this could have meant that he/she had never worked in a high acuity setting, or he/she was currently moonlighting in a high acuity setting. Consequently, answers to this response were not included in the final analyses of demographics.

A second question, “How competent are you in the care of patients with ballistic missile injuries?” also presented issues. Although to most nurses, ballistic missile injuries probably means gunshot wounds, ballistic missile injuries could also be interpreted as injuries sustained from ballistic missiles, meaning rockets having a long target range that fly at high speeds and high altitudes. Injuries sustained from ballistic missiles could include injuries associated with weapons of mass destruction (WMD) such as chemical, biological, and nuclear warfare, as well as injuries caused by large-scale impact or blast. The developer of the AF instrument, the READI-R-AFN [SF], was contacted for clarification. Lt Col Dremsa’s interpretation was also bullet injuries but she agreed that some nurses could have interpreted this as WMD, especially in light of current international threats. As an aside, she suggested clarifying the READI-R-AFN [SF] by adding the word *bullets* in parentheses. For this study, ballistic missile injuries scored the lowest sample mean score out of the 10. However, because of possible ambiguity, recommendations will not be made regarding education deficits specific to ballistic missile injuries.

A third limitation of the survey was that information was not gathered on the respondents’ mobility status. According to the 2002 RSVP guide, warskills training is no longer required for nurses who are not filling a mobility position. Deployment positions,

classified as Unit Type Codes or UTCS, are matched against a particular nurse at a particular facility. Theoretically a nurse who is not matched against a mobility UTC will not deploy. A question could have been easily added to ascertain this information from the respondent. This may have provided more information about effectiveness of training for those appointed to a deployable UTC as opposed to those who were not currently assigned to a deployable position. The relevance, however, may be minor because UTC assignments are frequently reassigned as active duty nurses move from one base to another. Secondly, the readiness mission is foremost for all military nurses and in the event of a full scale war with more than one front, the likelihood that all nurses will deploy may be high, regardless of the UTC.

A fourth limitation of the survey involved the method by which qualitative data were obtained. Because the survey was not designed with guided open-ended questions, opinions were not obtained from all of the respondents. Direct questions could have been added to prompt all respondents to answer on the same issues. For example an appropriate open-ended question might have been, "How would you improve training?" Or, "How has the outpatient setting affected your preparedness for deployment?" In spite of the fact that this information was not gathered on all respondents, comments seem to reflect honest input and shed light on statistical findings.

The final limitation involves the possibility of response bias. Respondents may have favorably distorted their self-reported competency levels, or they may not have been totally honest about matters that they perceived as career sensitive. However, due to the candor expressed in many of the comments and the assurance of anonymity in the introductory letter, the researcher believes that this potential was greatly curtailed.

Summary

Data were collected from USAF nurses using an AF approved web-based survey. The data for this study were analyzed using simple descriptive statistics, bivariate correlations, and thematic analysis of submitted comments. Limitations were primarily related to the design of the survey tool.

Chapter IV

Results

Introduction

In this chapter, analyses of the data are presented. The characteristics of the sample and the findings for each research question are described. Additional comments presented by the participants provided rich insight on the outpatient nurse's view. These views were analyzed using a qualitative approach and are presented as unanticipated findings.

Response Rate and Sample Characteristics

Two hundred and ninety-seven nurses from 43 different Air Force medical facilities participated in this survey. Of the 297 completed surveys, 24 did not meet sampling criteria and were not included in the analyses. The response rate was calculated from the combined number of USAF nurses who reportedly met sampling criteria from each of the 43 facilities. Facility specific numbers were obtained from each of the chief nurses. Based on numbers reported, the total combined nurse population who met sampling criteria in the 43 participating facilities was 497 nurses. Two hundred and seventy-three valid responses were obtained. This is a 54.9% response rate. However, as evidenced by 24 surveys completed by nurses with less than one year experience in the outpatient setting, or with a rank greater than major, it can be deduced that reported numbers may have been inaccurate. Reported numbers may not have excluded nurses

who did not meet sampling criteria. If this is true, the response rate may actually be somewhat higher than 54.9%.

The sample characteristics of rank and education are displayed in Table 1. Seventy-six percent of respondents were female and 24% were male. The age of subjects ranged from 24 to 55 years of age with a mean age of 38.7. Only 5.9% (16 of 269) admitted to working a second part-time civilian job. All 16 of these jobs were in high acuity patient areas such as ICUs, emergency departments, medical/surgical wards, or inpatient obstetrics. Twenty-nine percent of respondents had been previously deployed as a nurse during their Air Force career.

Table 1

Rank and Education Characteristics of Sample

	Frequency	Percent
RANK		
2 nd Lieutenant	7	2.6
1 st Lieutenant	29	10.6
Captain	143	52.4
Major	94	34.4
HIGHEST LEVEL EDUCATION (6 missing)		
Bachelors other than nursing	3	1.1
Bachelors in nursing	154	56.4
Masters other than nursing	51	18.7
MSN	59	21.6

Table 2 displays descriptive statistics for years of RN experience. While the mean of years experience in a high acuity patient area was 6.84, the standard deviation of 4.54 years demonstrated much variance in experience. Frequency tables show that 16% of respondents had less than three years experience in a high acuity patient area before being assigned to the outpatient setting. Six of these nurses reported that they had never worked on an inpatient unit or any other high acuity area prior to their assignment in outpatient care.

The mean length of time spent in an outpatient assignment was 3.92 years. But again, frequencies revealed that 31.4% of respondents had already spent five or more consecutive years in an outpatient assignment.

Table 2

Descriptive Statistics of Years RN Experience

	Mean	SD	Range
Total years experience as RN	11.84	5.91	1-28
Total years as active duty AF RN	8.87	5.02	1-20
Consecutive years in outpatient	3.92	3.12	1-25
Total years exp. high acuity	6.83	4.54	0-26

Table 3 displays descriptive statistics of the sample's primary Air Force specialty codes (AFSCS) and current assignments. The vast majority of respondents (69.1%) were classified as general clinical nurses, and 11.9 % were nurse practitioners and midwives.

The remaining nurses had various primary AFSCS. The majority of these nurses worked in family practice clinics (52.8%).

Table 3

Descriptive Statistics for AFSC and Current Assignment

	Frequency	Percent
PRIMARY SPECIALTY (4 missing)		
General clinical nurse	186	69.1
OB/GYN nurse	12	4.5
Nurse Practitioners & Midwives	32	11.9
Staff development	11	4.0
Critical care nurse	14	5.2
OR nurses	6	2.2
Other*	8	2.9
CURRENT ASSIGNMENT (6 missing)		
Family Practice Clinic	141	52.8
Pediatric Clinic	41	15.4
OB/GYN clinic	14	5.2
Flight medicine clinic	22	8.2
Health/wellness center	11	4.1
Internal medicine	9	3.4
Same day surgery	11	4.1
Staff development	7	2.6
Other**	17	6.2

* = Flight nurse, administrator, mental health, ER nurse

** = Infection control, population health, Utilization Management, ER, administration

Research Question 1

How do USAF nurses assigned to outpatient clinics perceive their clinical competence to perform in contingency operations? To answer this question sample means and standard deviations were calculated from the clinical competency scores. Clinical competency scores were self-rated by respondents on 10 different wartime skills. Self-ratings were based on a graded scale from one-to-five that corresponded to the respondent's perception of his or her level of competence. As explained in Chapter III, the lowest possible score of "1" meant the respondent felt he or she was not competent in that particular skill. The highest possible score of "5" meant the respondent felt he or she was totally competent in that skill. Table 4 displays the sample mean scores for each clinical competency.

The mean level of competence on 8 out of 10 wartime skills indicated a perception of moderately competent (a score of 3). Moderately competent was defined as needing some review and little supervision. Although none of the mean scores on the 10 competency skills reflected a perception of being highly competent (a score of 4), mean scores on three skills (implementing triage, airway management, and performing in emergency situations) fell slightly below a score of "highly competent" at 3.75, 3.68, and 3.60, respectively.

The category with the lowest mean score was "Taking care of ballistic missile injuries". The mean score (2.31) for this skill indicated a perception of minimally competent for the group. This was followed by "Fluid resuscitation in burn patients" with a mean score of 2.86, which fell slightly below moderately competent for the group.

Table 4

Perceived Levels of Clinical Competence (n = 273)

Skill	Sample Mean	SD
Role as nurse in mass casualty	3.35	.92
Performing in emergencies	3.60	.94
Taking care of life-threatening injuries	3.31	.91
Caring for multiple trauma patients	3.04	.97
Caring for ballistic missile injuries	2.31	1.04
Patients with tension pneumothorax	3.38	.97
Fluid resuscitation on burn patients	2.86	.97
Resuscitation with blood products	3.39	.98
Airway management	3.68	.95
Implementing triage	3.75	.87

Competency Scale

1= Not Competent, meaning I need theory, demonstration and supervised practice.

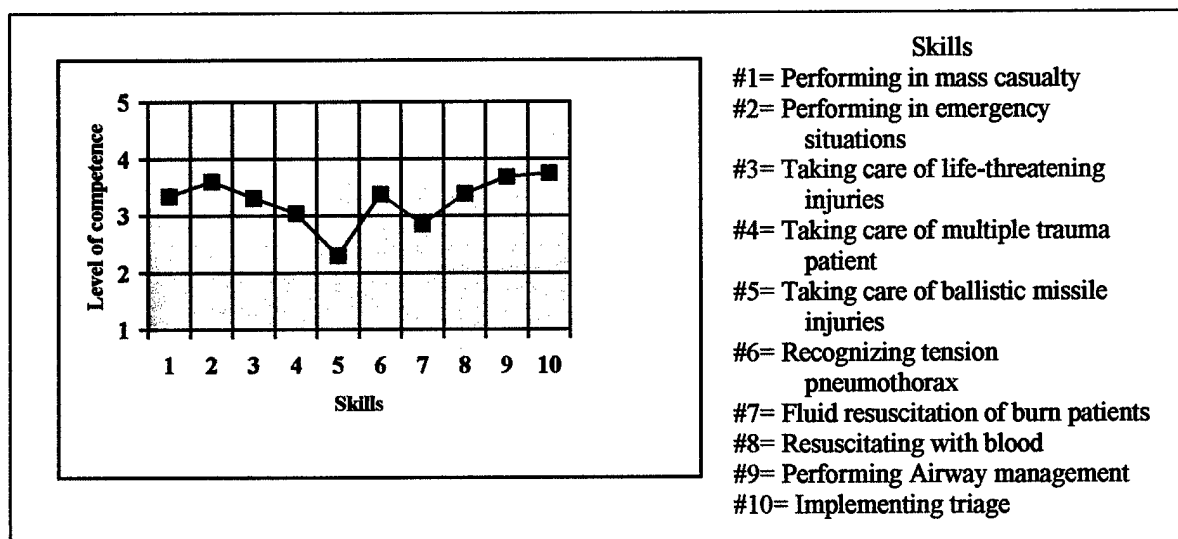
2= Minimally Competent, meaning I need review and supervised practice.

3= Moderately Competent, meaning I need some review and little supervision.

4= Highly Competent, meaning I need review only.

5= Totally Competent, meaning I need no review or supervision.

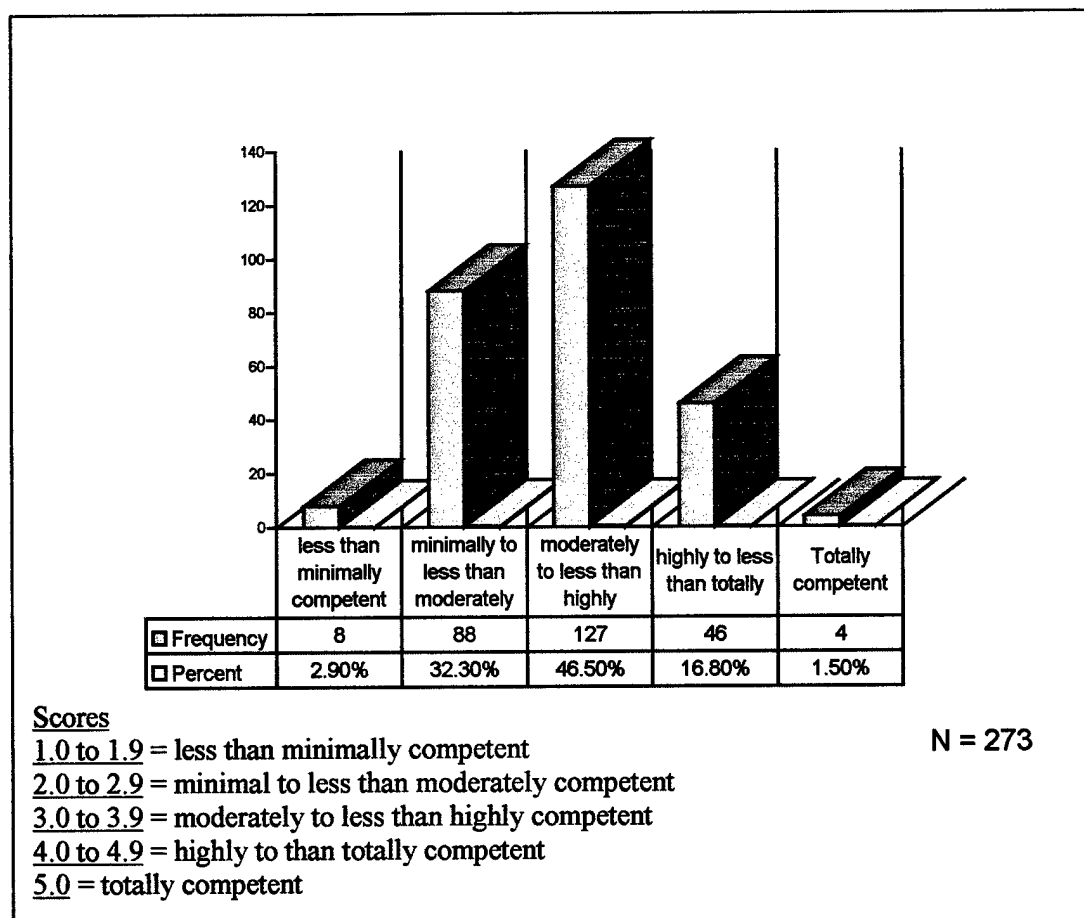
Figure 1

Mean Competency Scores

Frequency statistics revealed the variance in perceived competence that existed throughout the group. While 18.3% of respondents averaged a total score at or above highly competent (a score of 4 to 5), 35% of respondents rated themselves less than moderately competent (a score of 1 to 2). The distribution of average competency scores is displayed in Figure 2.

Figure 2

Distribution of Average Competency Scores



Research Question 2

What is the relationship between perceptions of current skills training programs and perceptions of clinical competence? The first step to answering this question was to determine how these nurses felt about current training. Respondents were asked to indicate their level of agreement for four different statements about skills training. Pearson's r was then used to determine the magnitude and direction of the relationship between attitudes towards training and clinical competency scores.

Perceptions of current training. Table 5 displays mean responses to attitude items related to training. Levels of agreement were based on a scale of one to five. As explained in Chapter III, an answer of "1" was equivalent to totally disagree, and an answer of "5" was equivalent to "totally agree". All four items were positively worded statements. Thus, scores closer to "5" endorsed these statements and indicated a favorable attitude toward training. Conversely, scores closer to "1" indicated a negative attitude.

The mean level of agreement for the first statement "I have been adequately trained to care for acutely injured casualties" demonstrated an overall neutral attitude (3.30) by the group. In contrast to this finding, there was much disagreement by respondents with the next three statements that addressed the perceived effectiveness of training. The most frequent response for these three items was "disagree", and the mean responses indicated an overall unfavorable attitude (2.21, 2.40, 2.64). Standard deviations for all training questions showed not much variance in perceptions (0.97 to 1.17).

Table 5

Mean Attitudes Towards Training (n=273)

	Mean	SD
I have been adequately trained to care for acutely injured casualties	3.30	1.07
I see NO need to make modifications to training/RSVP at my facility	2.21	0.97
Current training at my facility provides me opportunities to feel comfortable with psychomotor skills	2.40	1.17
Current RSVP training at my facility contributes to my readiness for deployment	2.64	1.16
Scale for level of agreement 1= Totally disagree 2= Disagree 3= Neither disagree or agree 4= Agree 5= Totally agree		

Frequency tables confirmed these findings and further clarified the extent of unfavorable attitudes towards training. While just over half of the respondents (57.5%) agreed they were adequately trained to care for injured casualties, many respondents felt unfavorable about the effectiveness of training programs. Sixty-seven percent disagreed with the statement, "I see NO need to make modifications to skills training or RSVP at my facility". Sixty-one percent of respondents disagreed with the statement that current training provides opportunities to feel comfortable with psychomotor skills, and almost half (49.1%) disagreed that current training contributes to readiness for deployment. Table 6 displays frequency of responses towards training items.

Table 6

Frequency Table of Attitudes Towards Training (n=273)

	Favorable Attitudes	Neutral Attitudes	Unfavorable Attitudes
I have been adequately trained to care for acutely injured casualties	57.5%	12.1%	30.4%
I see NO need to make modifications to training/RSVP at my facility	11.4%	21.2%	67.4%
Current training at my facility provides me opportunities to feel comfortable with psychomotor skills	24.1%	14.7%	61.2%
Current RSVP training at my facility contributes to my readiness for deployment	30.4%	20.5%	49.1%
Favorable = Agree and totally agree			
Neutral = Neither disagree or agree			
Unfavorable = Disagree or totally disagree			

The mean response and frequency of attitudes that result from the first training statement are distinctively different from measured attitudes resulting from the next three training statements. This may be attributed to the difference in the design of the statements. The first statement measures attitudes related to the respondent's perceived abilities. The next three statements measure attitudes related to perceived effectiveness of current training. Testing for internal consistency among the subparts of the four Likert items further validates this difference. When the first statement, "I have been adequately trained to care for injured casualties" is omitted from the analysis, Cronbach's Alpha is 0.80. When the first statement is added back into the analysis with the other three, internal consistency decreases ($\alpha = 0.73$). Thus, there is a higher level of homogeneity among the last three Likert items that measure the effectiveness of training programs.

Relationship between perceptions of training and perceptions of clinical competence. The second step to answering this research question was to compute the correlation coefficients between attitudes towards training and self-rated competency scores. Computations identified a moderately positive correlation between measured attitudes resulting from the first statement, "I have been adequately trained to care for acutely injured casualties in a contingency operation", and self-rated clinical competency scores. There was a low positive correlation between perceptions of training effectiveness and perceptions of clinical competence. Table 7 displays these results.

Table 7

Correlation between Perceptions of Training and Perceptions of Competence

Training Variable	Pearson's R
I am adequately trained to care for injured casualties	.446
EFFECTIVENESS OF TRAINING PROGRAMS	
Sees NO need to modify RSVP training	.145
Training provides opportunities for psychomotor skills	.132
Training contributes to readiness for deployment	.142

Unanticipated Findings

An optional comment section, added as the last component to this structured survey, resulted in a rich and unexpected collection of perceptions and concerns from the respondents. Comments were added to 96 surveys. Qualitative analysis led to the emergence of four closely related themes: (a) deficient clinical skills related to the outpatient assignment, (b) unpreparedness for deployment, (c) perceived clinical

competence related to previous acute care experiences or current moonlighting job, and (d) job dissatisfaction related to the outpatient assignment.

Deficient clinical skills related to the outpatient assignment. This theme emerged in 30 different comments. Deficient clinical skills included clinical skills that had eroded, and clinical skills that had never developed. These nurses felt that the outpatient assignment did not provide opportunities for nurses to practice or utilize clinical skills. Lack of actual skill opportunities led experienced nurses to believe they were no longer as clinically competent as they once were. Sixteen self-described seasoned nurses, who felt they were once very skilled, described the effect of the outpatient assignment on their clinical skills. Words such as “lost”, “eroded”, “diminished”, “crippled”, “weakened”, and “rusty” described the effect. One nurse wrote, “I am a very skilled and competent O.R. nurse and I feel working in family practice is crippling me clinically.” A second nurse wrote:

It is very difficult to maintain clinical competence in this setting. For me, at least I have a strong background in ER, critical care and flight nursing coming into this assignment that has helped me with my skills. I do feel that I am losing them rapidly, however.

Seventeen separate comments expressed concerns related to new nurses assigned to the outpatient clinic. Nurses, who identified themselves as experienced, wrote that “new” or “young” nurses, who had little to no acute care patient experience prior to their outpatient assignment, did not possess critical thinking, organizational, and/or basic psychomotor skills. One respondent captured the views of others when she wrote:

Watching new nurses enter the military and being sent directly to the outpatient

clinic is unsettling. We have several individuals here who are incapable of prioritizing urgency of multiple task [*sic*], stepping back during emergency situations [*sic*] and void of even the most basic of nursing skills.

Although only seven nurses volunteered in the comment section that they were “new”, they expressed feeling at a disadvantage due to their lack of adequate acute care patient experience. One wrote:

I have worked in the outpatient setting my entire active duty AF career years....I plan to separate from the AF this coming June 2003...primarily due to the fact that I have been unable to obtain any inpatient experience while in the AF. I have always been an advocate of placing brand new nurses in the inpatient setting first prior to going to the outpatient setting.

Unpreparedness for deployment. The second theme that emerged in comments was the perception of unpreparedness for deployment. This was expressed in 51 separate comments, and was closely related to the perceived absence of hands-on patient care in both day-to-day duties and in current skills training programs. Interestingly, the expression “hands-on” was actually written twelve different times to convey the need for working and training with real patients. The absence of this quality in the outpatient nurse role, and in training programs, was clearly linked to the nurses’ perceived unpreparedness for deployment. The gamut of emotions from fear to frustration was conveyed over and over as respondents expressed that they and/or their coworkers were not clinically ready for deployment. Moreover, nurses expressed that current job duties and training were irrelevant and meaningless because they did not contribute to the readiness mission. A sampling of some of these excerpts include the following:

“The AF has hurt itself by putting its nurses on the telephone and computers doing telephone triage—this in no way prepares us to be trained wartime ready nurses.”

“What are they going to do if they get a troop with multi-trauma from war...telephone triage?”

“Training is not sufficient to handling real world emergencies. We are expected to be proficient at wartime medicine but...sore throats and sniffles for 2 hours must be dealt with.”

“Outpatient nurses do not have the experience to contribute meaningfully to a mass casualty when deployed”

“The push for PCO is affecting our ability to perform our wartime/readiness skills”

While 11 respondents stated that they did not do any form of skills training at their facility, another 36 respondents criticized current methods of training due to the lack of realism and absence of hands-on opportunities with real patients. Lab simulations, PowerPoint presentations, and other forms of didactic review were not perceived as meaningful. Some of these excerpts are included below.

“Readiness and wartime skills training cannot be accomplished via lecture and lab, each nurse must work with real patients to understand the mental challenge of a critical situation.”

“I don’t think that courses or review sessions are adequate to prepare nurses clinically for the skills needed for deployments/wartime.”

“Lecture and mannequins do very little to prepare the unskilled nurse for the unusual work environments and varied clinical skills sets needed during deployments.”

“Simulations and PowerPoint presentations don’t provide a comfort level or proficiency in nursing care.”

“CMRT/FMRT, what a joke. It is no real surprise that the sister forces look at our training and laugh.”

Positive comments about the effectiveness of current training programs were uncommon. There were only three comments that praised specific programs. One nurse hailed the EMEDS training as “fantastic”.

A second nurse wrote, “Best training I’ve had in my 13 years in the military was at Wilford Hall with their simulation mannequin. He was awesome.”

A third stated, “Recently our clinic has sent nurses...to CSTAR to work in a level III ER. These individuals state they feel more competent in their critical/trauma skills and would most likely function effectively in a mass casualty. Training is for one month.”

The suggestion to implement mandatory annual rotations in local medical centers was mentioned by twelve different nurses as a means to improve training, and provide realism. One nurse wrote, “It would be very helpful for nurses to be required to rotate through a true emergency room or intensive care unit on a semiannual basis to maintain skills and provide a reality check to true life, not military cushioned life.”

Another conveyed her passion by capitalizing certain words in her quote:

Hands on cooperation with civilian medical centers could and WILL save lives when deployed. A war machine will fight like it trains. When the time comes we will lose patients because we will function like we train. Time spent doing the tasks is the ONLY way we can get the hands-on training. An active MI or

multiple trauma code is NOT the time to start learning these skills.

Current clinical competence related to previous acute care experience or current moonlighting job. The third theme that emerged from the analysis was that the current clinical competence and readiness for deployment was solely the result of previous acute care experience or current acute care moonlighting jobs. Previous experience was extremely diverse, i.e., USAF nurses who had worked on busy inpatient units prior to the decade of base closures and downsizing, and/or prior civilian or paramedic experience. Twenty-six respondents expressed that their high level of competence and/or perceived readiness for deployment was a direct result of their prior acute care experience, or present moonlighting job. For example, "The only reason, I feel highly competent in my critical care skills is the time I spent working in an ER and ICU."

"I also work on weekends to keep my skills up in the local trauma ED. I feel this has kept me sharp and ready if I do get deployed."

"I was an AF medic and Independent Medical Technician, which greatly enhances my confidence in many listed skills."

This theme suggests that while present outpatient job duties and skills training may not contribute to perceived clinical competence, there is a perception from some nurses that they still feel competent and prepared to deploy due to their prior acute care experiences.

Job dissatisfaction related to the outpatient assignment. The final theme was job dissatisfaction related to the outpatient setting. This theme emerged in 26 separate comments. The dissatisfaction that resulted from the outpatient assignment was revealed as nurses described feeling devalued, burnt-out, frustrated, and unhappy with their

present roles. There was a perception that PCO nurse duties were menial. For example, three respondents referred to PCO nurse as a “glorified appointment clerk”. Another wrote, “a trained monkey could do our job”. Some more quotes that convey overall dissatisfaction include the following excerpts:

“All that I do is answer the phone, push papers and do telephone consults, triage and home care. This is not what I came in the military to do.”

“Why should we pay to renew a license we are not even using?”

“Nurses are wasting their skills in outpatient clinics. Working in an outpatient clinic has by far been the biggest disappointment in my 10 years in the USAF.”

“I am very frustrated as a clinic nurse. I feel I don’t even need a nursing license to do the work I am doing”

“The new PCO concept works great for the patient, but doing a tremendous disservice to professional RN’s. Clinic nurses are very unhappy, not using their full potential. Morale is low and no one seems to care.”

“I am so disappointed with my job. I am a triage nurse. I feel as if the AF is cheating me because my nursing skills and potential are not being used.”

One nurse’s impassioned comments conveyed her severe disappointment with the USAF. She wrote:

I should have gotten my commission in the Navy, because at least I know that I would be performing as a nurse. To be quite honest, I am nothing but a medical secretary. I spend a majority of my time on the phone each day and no one cares. The USAF Nurse Corps has been a big joke. Some of my coworkers...are actually moonlighting at the local civilian hospital to keep abreast of their clinical

skills. I am outraged that an AF nurse has to depend on the civilian sector to maintain clinical competency. Why serve as nurse in the AF if I have to get a civilian job to get the most out of my nursing career? If I would've [sic] known that it was going to be like this, I would've stayed at my civilian job...I must tell you that I am not surprised that the USAF has a difficult time retaining nurses.

Summary

This chapter presented findings of a survey conducted with 273 active duty AF nurses assigned to the outpatient setting. The Clinical Competence Measurement Model indicated that participants had a mean perception of moderate competence in 8 out of 10 readiness clinical skills. Almost 82% of respondents perceived themselves as less than highly competent to perform warskills. Likert Scale items that measured perceived effectiveness of current training programs revealed unfavorable attitudes by many nurses. There was not much of a relationship between perceptions towards training programs and perceptions of competence.

Qualitative analysis of comments was accomplished by extracting key statements and phrases that led to the discovery of commonalties. Four themes emerged out of 96 comments, to include: (a) deficient clinical skills related to the outpatient assignment, (b) unpreparedness for deployment, (c) perceived clinical competence related to previous acute care experiences or current moonlighting job, and (d) job dissatisfaction related to the outpatient assignment .

Chapter V

Discussion

Introduction

The purpose of this study was to discover how USAF nurses assigned to outpatient clinics perceived their clinical competence to practice in contingency operations, as well as to discover if perceptions of current training were related to perceptions of competence. Nurses working in the outpatient clinic have few opportunities to hone clinical skills. If nurses had a high perception of clinical competence this would have suggested that gaps between peacetime nursing and nursing during contingency operations were being appropriately addressed. Furthermore, a strong positive correlation between perceptions of competence and perceptions of training may have suggested that current skills' training was a positive contributor to perceptions of clinical competence. Conversely, low levels of clinical competence would have suggested that gaps were not being addressed and perhaps current warskills training needs to be reexamined and aggressively modified to meet these nurses' training needs.

Sample Characteristics

Characteristics of the 273 respondents were similar to those of the total population of USAF nurses. Females in the USAF Nurse Corps represent 70% of all nurses and males 30% (Brannon, 2002, October). In this study, 76.2% were female and 23.8% were

male. In the USAF Nurse Corps, captains represent 56% of all nurses in the combined ranks of lieutenants, captains, and majors (Brannon, 2002, October). In this study, 52.4% were in the rank of captain. There was also broad participation from 43 different facilities. This representation captured the diversity present in size, location and mission of AF medical facilities around the world. The largest participating facility was the 95th Medical Group (MDG) at Eglin AFB, Florida with 45 inpatient beds and 48 nurses assigned solely to outpatient services. The smallest participating facilities included the 65th MDG, Lajes AFB, Azores, the 311th MDG, Brooks AFB, Texas, and the 71st MDG, Vance AFB, Oklahoma. These three facilities had as few as three nurses who reportedly met criteria.

Clinical Competence

The mean score (n=273) for 8 of the 10 clinical competency categories indicated a perception of moderate competence. This finding suggests that despite few opportunities to practice skills during the normal workday, most nurses felt moderately competent in 8 out of 10 deployment skills. While no competency categories reflected a perception of being highly competent by the group, three categories (implementing triage, airway management and performing in emergency situations) fell slightly below a score of highly competent at 3.75, 3.68, 3.60, respectively.

The category, "Taking care of ballistic missile injuries" had the lowest mean score of 2.31. This was followed by "Fluid resuscitation in burn patients", with a mean score of 2.86. This indicated that the group felt minimally competent in these two categories, and that the average training intervention needed would be review and

supervised practice. While ballistic missile injuries merit further clarification as described in limitations Chapter III, nurses revealed that they felt the least comfortable with this competency item. Waddell (2001) emphasized that self-assessment was an important component of professional accountability for competence. Rating clinical competence in wartime skills is an effective way of identifying individual training needs and should be routinely included in the development of each facility's skills training programs.

Although the mean scores reflected a perception of moderate competence in 8 out of 10 categories, many respondents perceived their individual skills as less than moderately competent. Frequency tables revealed that 35.2% of the sample averaged a self-rating in 10 categories that was less than moderately competent. While 35.2% represented the minority, it still included 96 nurses from this survey. Since this sample provided sound representation of the target population, it can be concluded that there are a number of nurses (about 1/3) working in the outpatient setting who feel less than moderately competent. This perception was also confirmed as a major concern in the qualitative data. Themes that addressed deficient clinical skills and unpreparedness for deployment validated that many nurses had concerns about low levels of clinical competence in themselves and/or their coworkers. These nurses clearly expressed the belief that deployment of outpatient nurses could be detrimental to the readiness mission.

The concept of moderate competence also merits further discussion. Frequency tables indicated that only 18.3% of the respondents averaged a self-rating of highly competent to totally competent. Yet almost half of the respondents (46.5%) averaged a

self-rating of moderately competent. According to the scaled definition, moderately competent is defined as needing some review and little supervision. While this rating surpassed the abilities of those who graded themselves as minimally competent and/or not competent, the question needs to be asked, "Is moderately competent an acceptable level of competence for military nurses?" If these nurses are expected to function independently in a contingency operation, this is probably not good enough.

In Scannell-Desch and Anderson's study (2000), nurses who served in Vietnam described mass casualty situations in which they often received more than 100 patients at a time. One Army nurse recalled how on the day she arrived in Vietnam there was a mass casualty of 185 patients. An Air Force nurse described how she and one other nurse supervised care for up to 70 patients. Nurses who had less than two years clinical experience (acute care) prior to deployment to Vietnam, described feeling overwhelmed and ill-prepared for the life-threatening injuries and the volumes of casualties encountered. In light of these military nurses' historical experiences, is it realistic to believe that in a wartime situation, there will be time to provide nurses who are moderately competent with some review and supervision? Probably not.

In Patricia Benner's book, *From Novice to Expert* (1984), she identifies one of the seven domains of nursing as the effective management of rapidly changing situations. This domain includes skilled performance in extreme life-threatening emergencies, rapid matching of demands and resources in emergency situations, and identifying and managing a patient crisis until physician assistance is available. While managing a life-threatening emergency in a war zone would present very different situational stressors

than those encountered in a civilian hospital, many aspects of the situation are similar. Benner stresses that in a life-threatening emergency, considerable knowledge and skill are required for the nurse to rapidly intervene without waiting for a physician's response. This nurse must possess a high degree of expertise in order to identify a patient crisis accurately and then intervene appropriately. Furthermore, this level of expertise can only be developed through the process of comparing similar and dissimilar clinical situations with one another. Therefore, performing proficiently in a life-threatening emergency demands that the nurse has deep background understanding of clinical situations based upon many past paradigm cases (Benner, 1984).

A high level of expertise is required of the military nurse to effectively manage life-threatening emergencies. A mass casualty situation is not an environment conducive to providing needed review and supervised practice. In this study, 46.5% of the nurses rated themselves as moderately competent, and another 35.2% rated themselves as not competent or minimally competent. This indicates that the majority of outpatient nurses (81.7%) from this sample do not possess the perceived level of clinical competence that is required in a contingency operation.

Skills Training

There were four opinion statements on training that were used to measure the group's attitudes. Just over half of the sample (57.5%) felt favorable about the first statement "I am adequately trained to care for the acutely injured in contingency operations." The mean response indicated a neutral attitude (3.30), and there was a moderate correlation between this perception and clinical competency scores (.446).

This indicated that higher competency scores were somewhat related to more favorable attitudes towards feeling adequately trained. The respondents' varying interpretations of "adequately trained" may have prevented a stronger correlation.

Responses to the other three statements on training indicated an alarmingly high percentage of nurses who had negative attitudes about the effectiveness of current training. It should again be noted that these three statements were constructed somewhat differently than the first statement, and measured a different dimension. As discussed in Chapter IV, this is supported by Cronbach's Alpha that indicates a higher degree of internal consistency when the first training item is omitted from the reliability test (0.80 versus 0.73). That first statement, "I am adequately trained..." measures how the respondent perceived himself/herself. But the next three statements focused on the perceived effectiveness of the training programs. Consequently, the mean responses to these three statements differed from the first, indicating unfavorable attitudes. In addition, there was not much of a relationship between these attitudes towards training and perceptions of competence.

Frequency tables interpreted the extent of unfavorable attitudes. Sixty-seven percent of nurses viewed the following statement as unfavorable, "I see no need to make modifications to current RSVP training". Sixty-one percent disagreed with the statement that current training provides opportunities to feel comfortable with psychomotor skills, and 49.1% disagreed that training contributes to readiness for deployment.

The prevalence of unfavorable attitudes towards current training may be explained by examining the differences between theoretical knowledge and practical

knowledge. Benner (1984) states that while theoretical knowledge explains and predicts conditions, practical knowledge is developed through clinical experience in the practice of the discipline. It is the difference between “knowing that” and “knowing how”.

Practical knowledge or “knowing how” develops when the nurse tests and refines propositions, hypotheses, and principle-based expectations in actual practice.

“Experience is therefore a requisite for expertise” (Benner, 1984, p.3). It is the difference between the beginner nurse and the nurse who is proficient. This difference can be attributed to the “know-how” that is acquired through experience.

Benner’s assumptions shed light on the findings of this study. Many respondents expressed the opinion that current RSVP training methods, including PowerPoint, simulations with mannequins, lectures and didactic review sessions, were inadequate and meaningless. While these methods of training provide theoretical knowledge they do not provide the “know-how” that is attained through practice in the discipline (practical knowledge). Respondents recognized this training deficit and these concerns emerged as a major theme in the qualitative analysis of comments. Hands-on patient care and practice were viewed as essential components that were currently missing from RSVP training. Respondents suggested rotating nurses through medical centers to ensure meaningful training that enhanced clinical skills and preparedness for deployment. This is compatible with definitions of competence that infer that skills and knowledge can only be mastered through practice and productivity (Abruzze, 1996; Dreyfus & Dreyfus, 1996), and with the concept that clinical experience is a requisite for expertise, higher learning, and gaining “know-how” (Benner, 1984; Oermann & Gaberson, 1998).

The concept that “know-how” (practical knowledge) is attained through experience was further validated by the nurses in this sample who expressed that they felt competent and prepared to deploy as a result of their previous experiences in high acuity settings, and/or current moonlighting jobs in high acuity settings. This was one of the themes in the qualitative analysis. The “know-how” that the nurse attains through past concrete experiences provides her/him with the expertise necessary to solve problems without wasting consideration on a large number of irrelevant options (Dreyfus, H., 1979; Dreyfus, S., 1981 as cited in Benner, 1984). One nurse in this study astutely recognized this advantage when she wrote:

I believe my base experience as a nurse at Wilford Hall (medical center) enables me to continue to be competent in war skills...I can fall back on those initial learned skills when the time comes` as I did when I was deployed. I feel as if no matter what I do from now on I always have those skills to rely upon.

All of these findings suggest that current training is not instrumental in filling the gaps between peacetime and wartime nursing. These findings also support participants’ suggestions for time-worthy rotations at medical centers. CEU classes, lab simulations, and episodic training are viewed as poor substitutes for productive practice with real patients in real situations. Practical knowledge, that is necessary to develop or maintain the perception of clinical competence for deployments, can only be attained through practice of the discipline and not through current methods of RSVP training.

Recommendations for Practice

Previous studies demonstrated that clinical competence is the most important component of medical readiness for nurses (Reineck, 1999; Scannell-Desch & Anderson, 2000; Stanton-Bandiero, 1998). Current levels of perceived clinical competence in this sample are not compatible with the level of competence that may be required during a contingency operation. Individual perceptions of clinical competence, by the USAF outpatient nurse, merit further exploration. Since RSVP training is the responsibility of the individual facilities, questions need to be asked within each facility to determine each nurse's perceived level of competence. Skills training needs to be accomplished in actual practice situations that provide nurses opportunities to apply concepts and theories to practice (Benner, 1984; Oermann & Gaberson, 1998).

Perceptions of clinical competence for deployment can be improved by ensuring that these nurses are provided with acute care experience. AF nurse leaders within individual facilities need to step-up to this challenge. Memorandums of understanding should be routinely developed between AF facilities and local medical centers to provide nurses who are assigned to outpatient clinics with practice opportunities in high acuity patient care areas. Time worthy-rotations within these acute care settings should be scheduled on a regular basis to ensure that active duty nurses have opportunities to practice critical thinking and psychomotor skills. The average number of hours a nurse should practice in an acute care setting to regain a perception of being highly competent merits further research. Another question to be answered is "How much time can elapse

between acute care rotations without the nurse losing his/her sense of being highly competent”?

Providing nurses with practice opportunities will result in improved perceptions of clinical competence and readiness for deployment, and may also dispel the belief that nurses are not valued in the AF as professionals. According to nurses’ comments within this study, retention rates will be positively impacted if these issues are adequately addressed. From 1995 to 2001, the percent of nurses who separated from the AF rose steadily from 6% to 8.5% (Brannon, 2002, October).

The issue of nurses assigned to outpatient clinics, with little to no acute care experience, deserves substantial attention. Sixteen percent of nurses surveyed had less than three years experience in acute care prior to their outpatient assignment. Six of these nurses had never worked in acute care. While this percentage is low it will probably continue to escalate with current recruitment policies that have redefined the “qualified nurse”. Phenomenological research emphasized the need for the military nurses to have at least two years of clinical experience prior to deployment (Scannell-Desch & Anderson, 2000). Comments submitted from participants in this study repeated concerns about “new” nurses assigned to the outpatient setting who were devoid of fundamental clinical skills, including organizational competencies. An AF major reflected on the new nurse’s lack of experience and resultant lack of organizational skills:

We are more senior and have done our time in the ‘trenches”, that is what I call the wards, taking care of 40 med-surg patients, half of those fresh post-ops, with one nurse and two techs. Now we see these young 1st Lts coming out of school,

being put into a position of triage nurse in an outpatient clinic. The concern for us is, if we did go to war, how would all these new nurses survive, not having worked the wards with minimal resources, single-handedly. It's a scary thought.

The ability to coordinate, and to set priorities to meet multiple patient needs without missing important information is an important domain of nursing that can only be learned through clinical practice (Benner, 1984). Mastery of organizational skills would be a must for nurses working in mass casualty situations or any scenario that required multiple tasking for high volumes of patients. Organizational skills are not something that can be attained through theoretical knowledge gained in RSVP training or even in four days of clinical experience provided through TopSTAR. Benner (1984) also wrote that principles taught by simulation and case study cannot capture the complexity of the organizational demands placed on the new nurse, who must learn the local, the particular, the contingent, and the historical in mastering management and leadership skills.

It is essential that new nurses recruited with less than three years of acute care experience are initially assigned to a medical center in a high acuity patient care area. This experience is necessary to ensure essential psychomotor skills and organizational skills that will enhance competence, readiness and morale.

Finally, it is imperative that AF leaders further explore morale issues related to the outpatient setting. This survey indicated that many outpatient nurses felt devalued as professionals because of their duties within the PCO organization. This was tied closely to the perception that their clinical skills had suffered, and they felt unprepared for the readiness mission. Many nurses expressed emotional frustration and resentment due to

their unfilled expectations as military nurses. The issue of retention was mentioned several times, and negativity and sarcasm were pervasive in comments. It can only be speculated how long-term implementation of the PCO concept will impact future retention rates. An Air Force wide climate assessment survey that targets outpatient nurses is strongly recommended to assist AF leadership in determining the specific concerns related to morale and job satisfaction. This information could be invaluable in boosting Nurse Corps retention rates.

Summary

History has demonstrated that the number and types of life-threatening injuries encountered in previous wars were overwhelming to nurses who did not possess clinical experience. A high level of expertise is required of nurses to deal effectively in life-threatening emergencies. In this study, 46.5% nurses rated themselves as moderately competent, and 35.2% rated themselves as minimally competent or not competent. This indicates that the majority of outpatient nurses (81.7 %) from the sample do not feel that they possess the level of clinical competence required in a contingency operation, particularly war.

The majority of respondents also had unfavorable attitudes about the effectiveness of current RSVP training. While current training may provide theoretical knowledge, it does not provide the practical knowledge needed to develop or maintain the clinical expertise required in a deployed setting. Findings suggest that current training for AF nurses assigned to outpatient clinics does not fill the gaps between peacetime and wartime nursing. Since “know-how” can only be attained through clinical experience

(Benner, 1984) there is a great need for acute care practice opportunities to be routinely incorporated into skills training for AF nurses.

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Appendix A

Introductory Letter

Dear (name of Chief Nurse)

I am an AFIT nursing student conducting research on ADAF nurses assigned to the outpatient arena. The purpose of this study is to discover how this group of nurses perceives their clinical competence to practice in contingency operations, and to see if current skills training contributes to their perception of clinical competence. I am surveying nurses through an AF approved web-based survey (USAF SCN 02-060) that is accessed at the following URL address: <http://what.resnet.uwyo.edu/inetpub/default.asp>

To assist me in this process, I would greatly appreciate if you would distribute this email to your nurses working in the following areas: outpatient clinics (including NPs), education and training, and the HAWC. In addition, if you would email me confirmation that you have distributed this email, as well as the total number of nurses within your facility that meet these sampling criteria, it would aid me tremendously in tracking the response rate. Criteria for participation include AD nurses with a rank of O-1 to O-4 who have served in an AF outpatient setting (as a nurse) for at least one year.

To participate in this 5-minute survey, please click on:

<http://what.resnet.uwyo.edu/inetpub/default.asp>

After completing the survey, click the "submit button". There are minimal risks to participation. Answers are completely anonymous and cannot be traced back to the facility of origin.

While there are no immediate benefits for participating, results of this study may influence future methods of skills training. Each participant's time and honesty will greatly contribute to the growing body of knowledge on military nurses and preparedness for deployment. Survey responses will be transferred to a database that cannot be linked to an individual's name or facility. However, complete answers to demographic questions are necessary for the most accurate analysis of data. All information collected is secured and held in the strictest of confidence.

Results of this study will be available at the University of Wyoming, Coe Library, and on file with the AFIT library after completion in May 2003. For any concerns/questions please contact me at 307-221-2272 or email me at

Appendix A, continued

You may also contact my thesis committee chair: Mary Beth Stepans, PhD, University of Wyoming, School of Nursing at 307-766-6568.

Respectfully,

Mary Hornback, Major, USAF, NC

Appendix B

IRB Approval



Vice President for Research

P.O. Box 3355
Laramie, Wyoming 82071-3355
(307) 766-5353 • (307) 766-5320
FAX (307) 766-2608

TO: Mary Hornback
5423 Hayes Avenue
Cheyenne, WY 82001

FROM: Roger Wilmot, Chairman, Institutional Review Board
Associate Vice President for Research

A handwritten signature in cursive, appearing to read 'RW', is written over the 'FROM' line.

DATE: May 22, 2002

Re: IRB Proposal, "U.S. Air Force Nurses Assigned to Outpatient Care: Perceived Clinical Competence In Contingency Operations"

We have reviewed the proposal reference above. The proposal involves

- a survey procedure
- an interview procedure
- public observation
- research on the effectiveness of instructional techniques
- other:

and as such is exempt from review by the Institutional Review Board for projects involving human subjects. The proposed procedures qualify as exempt only if the participants are at least 18 years of age. If the participants will be under 18 years of age, please let us know immediately; the age of the participants could place your proposal in a different category.

We appreciate your keeping the Board apprised of your activities. You may proceed with the proposed project. Please feel free to contact me if you have any questions.

cc: M. Stepan

Appendix C

HQ AFPC Approval

~ From: Hamilton Charles H Civ AFPC/DPSAS ~

From: Hamilton Charles H Civ AFPC/DPSAS
To: "c.hornback@attbi.com" <c.hornback@attbi.com>
Subject: RE: survey approval
Date: Fri, 24 May 2002 13:29:13 -0500

Major Hornback

You did such a great job on your approval package...it was easy to review and is approved. I have only one comment regarding the agree/disagree scale for items 11-14. I recommend a 5-point scale of: Totally Disagree, Disagree, Neither Agree nor Disagree, Agree, Totally Agree. If your (mostly) agree scale has already been validated using your scale, then OK...but my scale is better!

Your survey is approved for either a paper/pencil postal mail survey or a web-based methodology. A survey control number (scn) of USAF SCN 02-060 is assigned and will expire on 30 Sep 02. We wish you success in your academic pursuits and in your career as an Air Force nurse. Best wishes.

Charlie Hamilton

CHARLES H. HAMILTON
Chief, AF Survey Branch
DSN 665-2448
(210) 565-2448

Appendix D

Perceived Clinical Competence Questionnaire

**This survey is approved by HQ AFPC, Survey Branch.
USAF SCN 02-060**

**The following survey should take no more than 10 minutes of your time to complete.
Please carefully consider each question. After selecting your answer in the drop down
menu and/or typing in your answer.**

Please remember to click the key at the end of the questionnaire!

Rate your level of competency according to the following scale

Scale for competency

- 1= **Not Competent** meaning I would need theory, demonstration and supervised practice.
- 2= **Minimally Competent** meaning I would need review and supervised practice.
- 3= **Moderately Competent** meaning I would need some review and little supervision.
- 4= **Highly Competent** meaning I would need review only.
- 5= **Totally Competent** meaning I would need no review or supervision.

Directions for questions 1-10.

**Click on the answer that best corresponds to your perceived level of
competence for each readiness task using the scale for competency above.**

Question 1.

1. How competent are you in your role as a nurse in a mass casualty (MASCAL) situation?

▼

Question 2

2. How competent are you to perform in emergency situations, such as those of patients in cardiac arrest?

▼

Question 3

3. How competent are you taking care of life threatening injuries?

Appendix D, continued

Question 4

4. How competent are you in providing nursing care to a multiple trauma patient?

Question 5

5. How competent are you in the care of patients with ballistic missile injuries?

Question 6

6. How competent are you in recognition of a patient with a tension pneumothorax?

Question 7

7. How competent are you in the fluid resuscitation of a burn patient?

Question 8

8. How competent are you in performing resuscitation with blood products?

Question 9

9. How competent are you with performing airway management?

Question 10

How competent are you in implementing the triage categories?

Directions for questions 11-14.

Select the answer from the drop down list that best corresponds to your perception of training.

Scale for Level of Agreement

- 1= Totally Disagree
- 2= Disagree
- 3= Neither Disagree or Agree
- 4= Agree
- 5= Totally Agree

Appendix D, continued

Question 11

11. I have been adequately trained to care for acutely injured casualties in a contingency operation.

Totally Disagree ▼

Question 12

12. I see NO need to make modifications in the current warskills or Readiness Skills Verification Program (RSVP) at my facility.

Totally Disagree ▼

Question 13

13. Current warskills/RSVP training at my facility provides me opportunities to feel comfortable with psychomotor skills (IV insertions, NG tube insertion, central lines)

Totally Disagree ▼

Question 14

14. Current warskills/RSVP training at my facility contributes to my readiness for deployment.

Totally Disagree ▼

Directions for questions 15 - 32.

Please select the appropriate answer or fill in the blank in questions 15 - 32 below to indicate your response !

If your answer is zero years or none, please indicate!

Question 15

15. How many total years, both military and civilian, have you actively practiced as a registered nurse?

Question 16

16. How many total years have you been active duty in the Air Force as a registered nurse?

Question 17

17. How many *consecutive* years have you worked in an outpatient position (both civilian and Air Force) as a registered nurse

Question 18

18. How many years has it been since you last provided direct patient care to acutely ill patients in an ER, medical/surgical unit, OB unit, ICU/NICU, or any other high acuity inpatient area (not including school), as a registered nurse?

Appendix D, continued

Question 19

19. How many total years did you work in an ER, medical/surgical unit, OB unit, ICU/NICU, or any other high acuity inpatient area (not including school), as a registered nurse?

Question 20

20. What is your military rank?

2nd Lieutenant ▼

Question 21

21. What is your age?

Question 22

22. Are you male or female?

Male ▼

Question 23

23. What is your primary AFSC? (Select One)

46A3 Nursing Administrator ▼

V26 Other

Question 24

24. What is your highest education level?

Bachelors in Nursing ▼

V31 Other

Question 25

25. Do you hold national certification in a specialty?

V32 Yes, in

V33 No

Question 26

26. Which type of outpatient clinic most closely matches where you are currently assigned?

Family Practice Clinic ▼

V43 Other

Question 27

27. Do you currently work part time ("moonlight") in an *acute care* setting at a civilian facility?

No

Yes, on a Unit.

Question 28

28. Have you ever been deployed? (If No, skip to question 31)

Yes ▼

Appendix D, continued

Question 29

29. How many times have you deployed?

Question 30

30. What was the length of your deployment in days (longest, if more than one)?

Question 31

31. How does your medical facility assist you in maintaining clinical competence?

Simulation Labs

V53

Other

Question 32

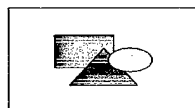
32. Comments:

Submit Answers

Clear Form

You have now completed the questionnaire.

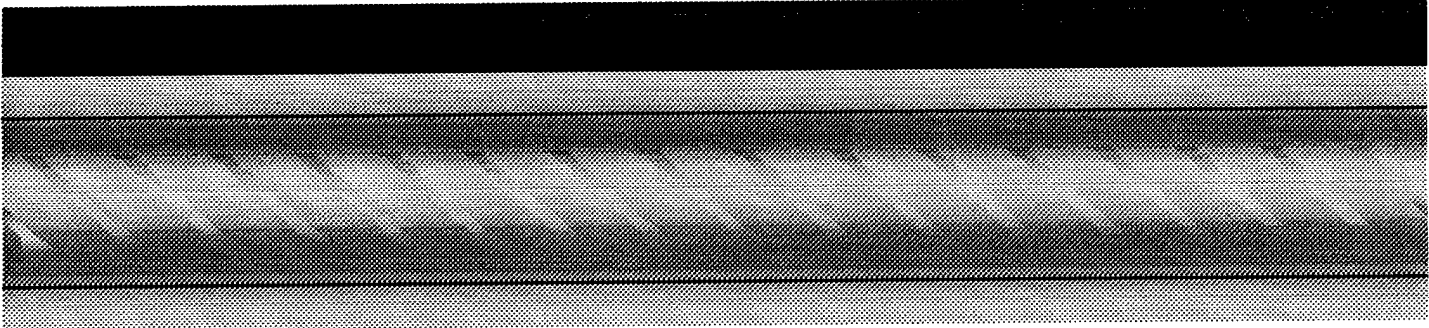
Thank you for your participation in this



study!!

Contact webmaster at: danetti@uwyo.edu

Revised: August 19, 2002.



**U.S. Air Force Nurses
Assigned to Outpatient
Clinics: Perceived Clinical
Competence in Contingency
Operations**

**by
Mary Hornback**

Background

- USAF nurses deploy in support of U.S. warfighters
- Numerous military hospitals have closed or converted to outpatient clinics
- AF Nurses working in outpatient clinics have few opportunities to hone/maintain clinical skills
- Nurse are dependent upon training to develop/maintain competence

Significance

- Military nurses from previous wars ranked clinical skills highest in terms of priority for prewar training.
- A high level of expertise is required for nurses to perform effectively in dealing with life-threatening situations.
- “Experience is therefore a requisite for expertise” (Benner, 1984).
- “Know-how” is attained through practice in the discipline.

Research Questions

- Question 1: How do AF nurses who are assigned to outpatient clinics perceive their clinical competence to perform in contingency operations?
- Question 2: What is the relationship between perceptions of current skills training programs & perceptions of clinical competence?

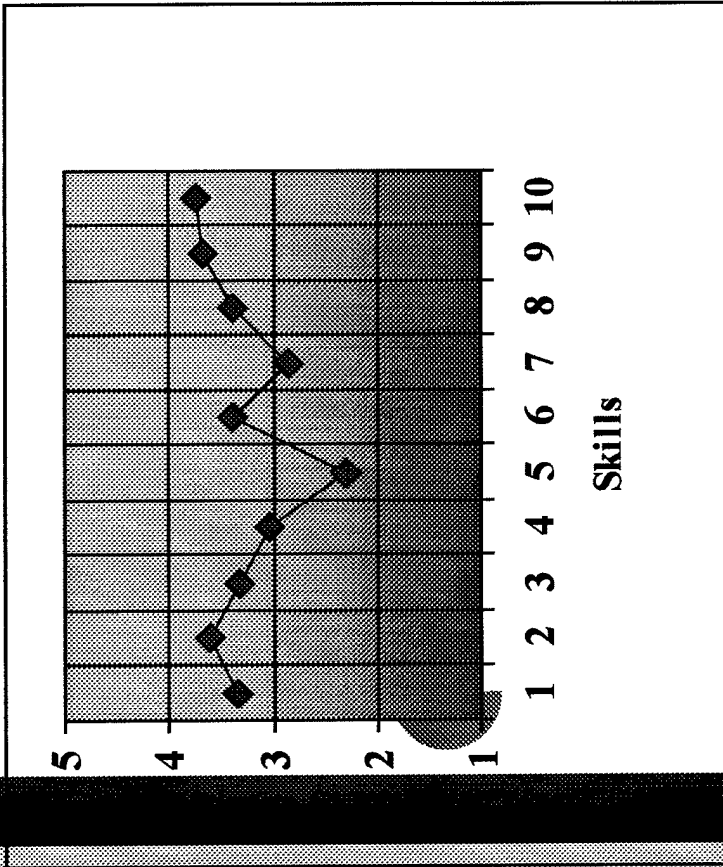
Sample

- 273 active duty AF Nurses in Outpatient Assignments
- From 43 Participating AF Medical Treatment Facilities Worldwide
- 54.9% response rate

Method

- Web-Based Survey
 - Perceptions of Competence were measured using AF Clinical Competency Measurement Model
 - Perceptions of Training were measured with 4 Likert Scale items on training
 - Open ended “Comments” section

PERCEPTIONS OF COMPETENCE MEAN COMPETENCY SCORES



SCALE FOR LEVEL OF COMPETENCE

- 1= not competent
- 2= minimally competent
- 3= moderately competent
- 4= highly competent
- 5= totally competent

Clinical Competency Measurement Model

#1= Performing in mass casualty

#2= Performing in emergency situations

#3= Taking care of life-threatening injuries

#4= Taking care of multiple trauma patient

#5= Taking care of ballistic missile injuries

#6= Recognizing tension pneumothorax

#7= Fluid resuscitation of burn patients

#8= Resuscitating with blood

#9= Performing Airway management

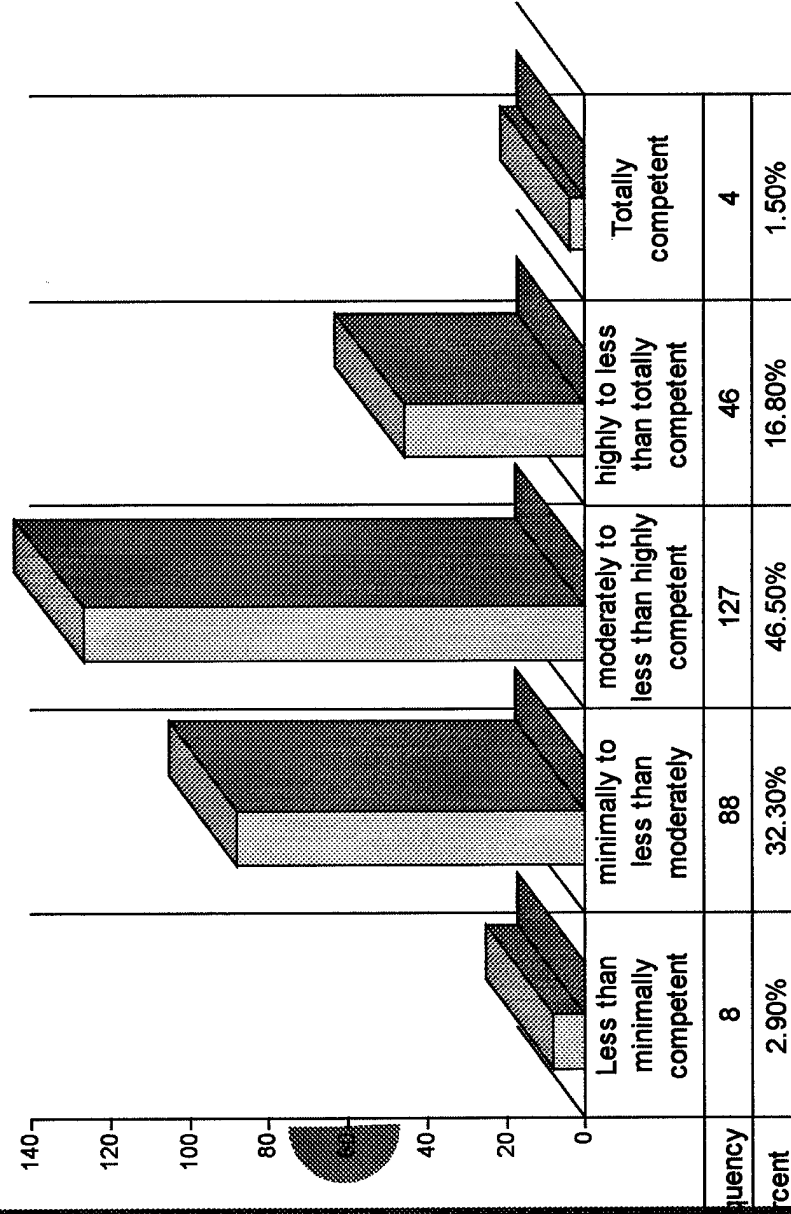
#10= Implementing triage

PERCEPTIONS OF COMPETENCE

Frequency of Average Clinical Competency Scores

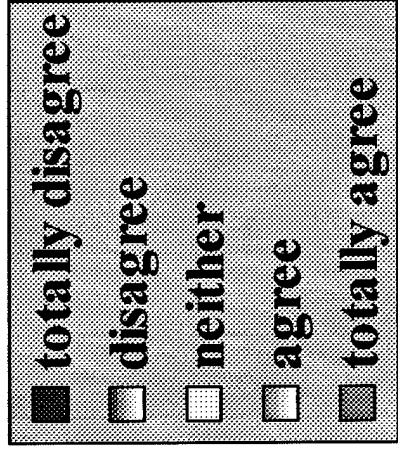
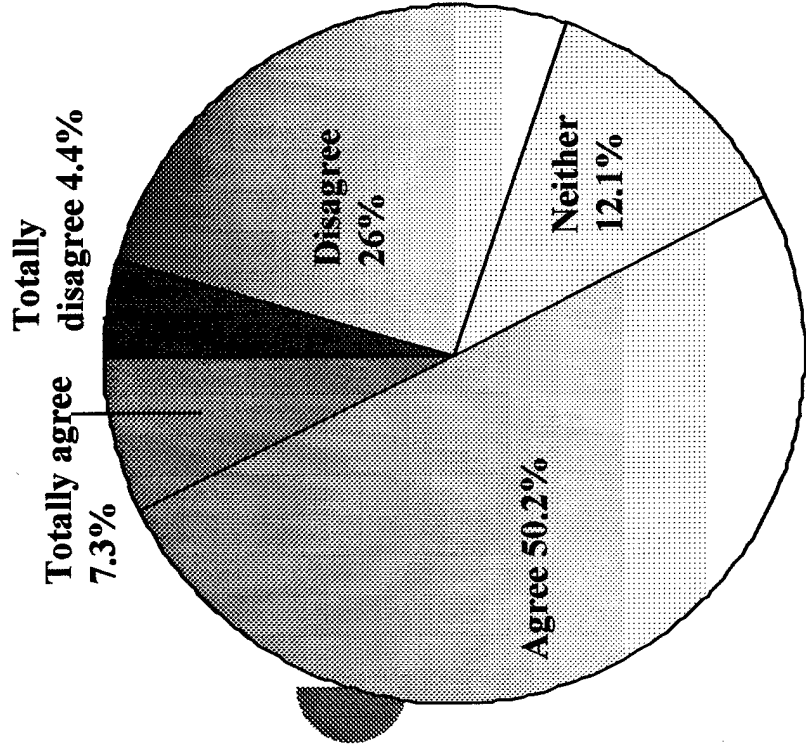
Competency Scores

Scores
<u>1.0 to 1.9</u> = less than minimally competent
<u>2.0 to 2.9</u> = minimally to less than mod. competent
<u>3.0 to 3.9</u> = mod. to less than highly competent
<u>4.0 to 4.9</u> = highly to less than totally competent
<u>5.0</u> = totally competent



PERCEPTIONS OF TRAINING

“I have been adequately trained to care for acutely injured casualties”



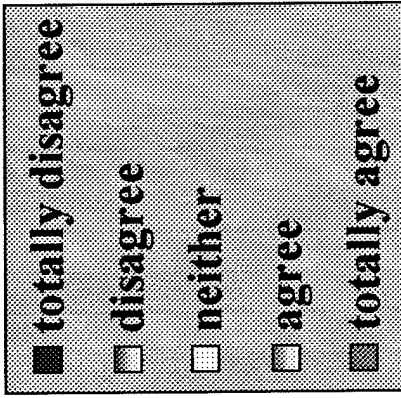
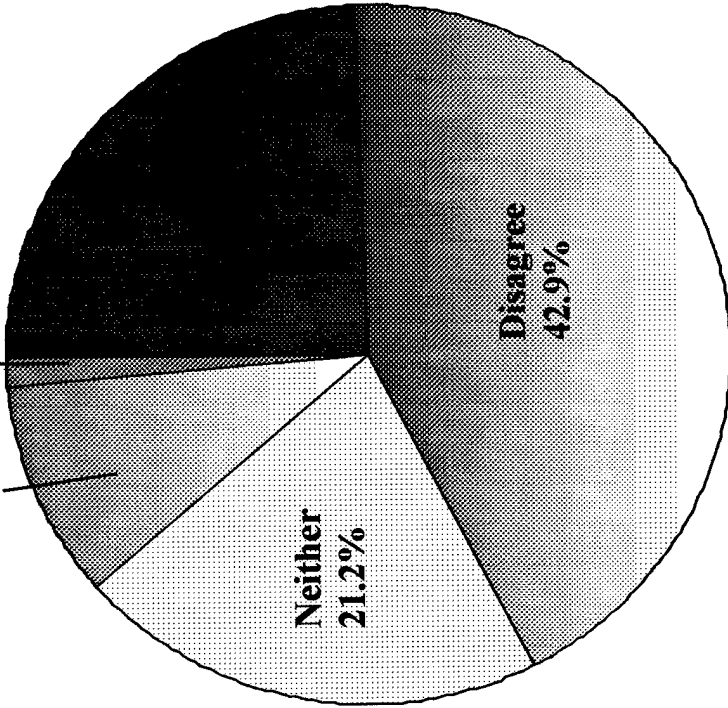
PERCENT AGREEMENT 57.5%
PERCENT DISAGREEMENT 30.4%

PERCEPTIONS OF TRAINING

“I see NO need to make modifications to training at my facility”

Agree 9.9 %

Totally agree 1.5%



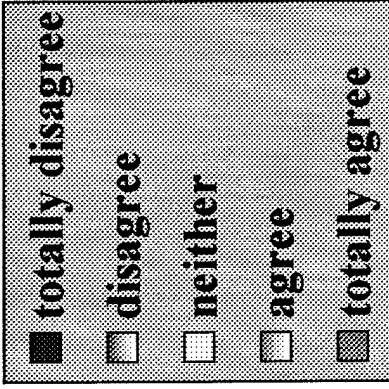
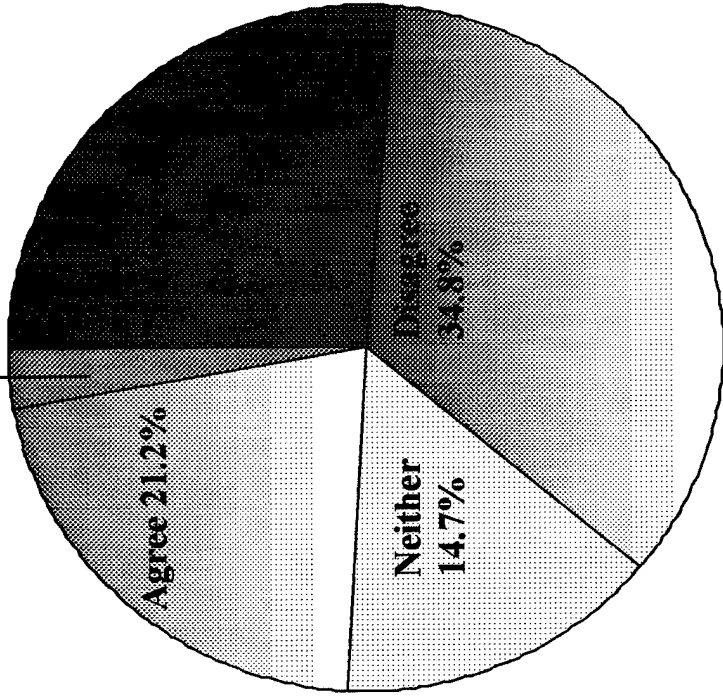
PERCENT AGREEMENT 11.4%

PERCENT DISAGREEMENT 67.4%

PERCEPTIONS OF TRAINING

“Current training provides me opportunities to feel comfortable with psychomotor skills ”

Totally agree 2.9%

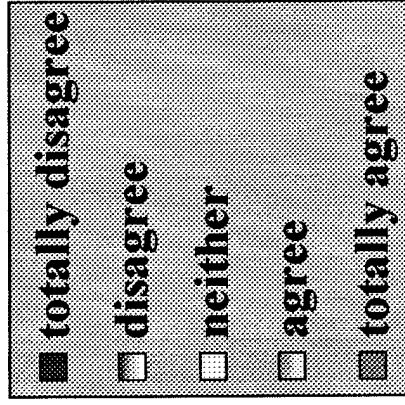
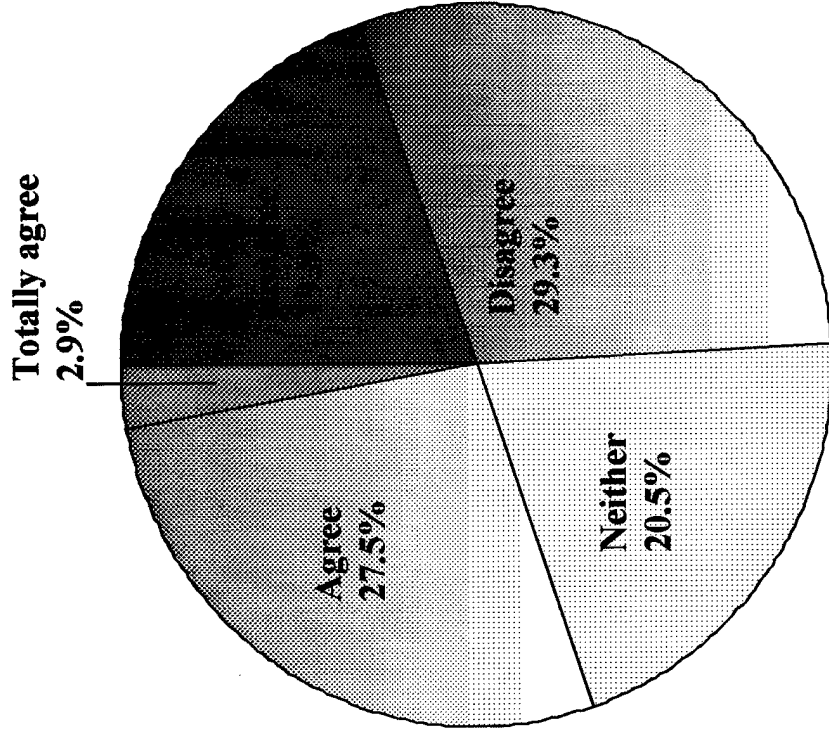


PERCENT AGREEMENT 24.1%

PERCENT DISAGREEMENT 61.2%

PERCEPTIONS OF TRAINING

“Current training at my facility contributes to my readiness for deployment ”



PERCENT AGREEMENT 30.4%
PERCENT DISAGREEMENT 49.1%

Correlation between perceptions of training & perceptions of competence

am adequately trained to care for injured casualties

Pearson Correlation .446

See NO need to modify training

Pearson Correlation .145

Training provides opportunities to practice skills

Pearson Correlation .132

Training contributes to readiness for deployment

Pearson Correlation .142

COMMENTS

Four themes emerged in qualitative analysis

Deficient clinical skills related to the outpatient assignment

Unpreparedness for deployment

Perceived clinical competence related to acute care experiences

Job dissatisfaction related to outpatient assignment

Conclusions:

Clinical Competence

- Of the 10 competency skills that none attained or exceeded a mean score of highly competent
- 81.7% scored themselves as less than highly competent
- Deficient clinical skills and unpreparedness for deployment were 2 common themes

Conclusions:

Skills Training

- Unfavorable attitudes prevalent towards current training program
- Low positive correlation between perceptions of skills training programs and perceptions of competence
- Unpreparedness for deployment related to lack of “hands-on” training
- Perceived clinical competence related to acute care experiences

Recommendations for Practice

Training needs to be accomplished in acute care settings that provide hands-on practice in the discipline

New nurses should be assigned to an AF medical center to acquire 2-3 years acute care experience

Morale of AF nurses deserves further exploration by leadership