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THESIS

AN ANALYSIS OF FIRST DUTY STATION PLACEMENT AND NEW GRADUATE TRANSITION EDUCATION ON RETENTION IN THE NAVY NURSE CORPS

by

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March 2010

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AN ANALYSIS OF FIRST DUTY STATION PLACEMENT AND NEW GRADUATE TRANSITION EDUCATION AND RETENTION IN THE NAVY NURSE CORPS

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ABSTRACT

This thesis examines the association between initial duty station assignment and retention of Nurse Corps officers. The main hypothesis of the thesis is that due to the increased clinical opportunities, higher patient acuity and larger patient census in major medical centers, Nurse Corps officers receive to more education and training prospects, which makes them more clinically prepared with higher job satisfaction. In nursing research, clinical preparedness and job satisfaction are positively linked with retention. Using qualitative techniques to analyze the professional nursing literature and interview with military and civilian hospital administrators, comparing and contrasting Nurse Intern Programs at three Navy major medical centers, two Navy mid-level hospitals and four civilian facilities, and the quantitative technique of a multivariate model to analyze cohort data for new nurse accessions from 1994–1998, the author compares Nurse Intern Programs and isolates the effect of Military Treatment Facility assignment on retention. The results indicate there is no Navy-wide standardized education program for new nurses, potentially negatively affecting overall medical readiness, and that assignment at a major Military Treatment Facility is not a statistically significant predictor of retention. Further analysis of Nurse Intern programs is necessary to establish the effectiveness of the programs.

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EXECUTIVE SUMMARY

Nursing retention is not just a Navy problem. It is a systemic problem throughout the profession. With an industry loss rate of approximately 20 percent, the Navy's loss rate average of 41 percent, between 2000–2004, and reported 2008 loss rate of 32 percent after 5 years of service is far above its civilian counterparts. Identifying strategies to prevent the hemorrhaging of Nurse Corps Officers is essential. The literature states that proper training of staff leads to increased job satisfaction, which positively influences retention. Because larger Navy medical centers offer more training opportunities than small hospitals, the new graduates assigned there for their first duty station assignment will be better clinically prepared and, therefore retain at a higher rate than those assigned to smaller facilities.

Nursing research indicates that new graduate nurses, the primary source of new officers in the Nurse Corps, do not possess the clinical abilities, critical thinking skills, and professional acumen to perform at the level of an experienced nurse. New graduate transition programs assist the new graduates in their progression from novice to expert nurse during the critical first year of practice. These programs not only increase the skills and abilities of the new nurse, but also have positive impact on retention and patient care.

New accessions to the Nurse Corps come from a variety of sources. Recruiting efforts focus primarily on new graduates either through enlisted commissioning sources, officer training programs, or direct accession. While a new emphasis is placed on recruiting particular mission critical specialties, those numbers comprise a small portion of the total recruiting goal. For fiscal year 2010, the Nurse Corps has exceeded its recruiting goal and has a wait list into FY2011. This is a positive first step to decreasing the current gap in the Nurse Corps' Lieutenant rank, created by not meeting recruiting goals between 2003–2005.

There are far reaching impacts to the increased recruiting goals and its attainment. Billet availability is based on hospital requirements and OPA guidelines. Increases in the number of ENS beyond the stated OPA, has resulted in the over-staffing of ENS at

MTFs. They are placed in O2 and O3 billets, resulting in a perceived level of skill and experience that is not there in reality. This creates a disconnect between the Nurse Corps apparent capabilities and what it is able to provide.

Nursing research indicates that a comprehensive new graduate nurse transition program, comprised of clinical and non-clinical components, assists with the transition and also increase retention. Although professional nursing organizations agree with the necessity and encourage the existence of the transition programs, there is no industry standard. However, the literature and successful programs instituted in Canada and Australia identify key program components that are essential for program success. The transition programs offered at Navy MTFs are different from each other and all fall short of the benchmark programs.

A multivariate analysis of new Nurse Corps officer cohorts from 1994–1998, in a longitudinal study, illustrated that assignment to one of the Navy's large medical centers had no statistically significant effect on retention over being assigned to a smaller hospital. While this information is relevant, it is also limited. The study represents a baseline for Nurse Corps retention because it demonstrates effects prior to the start of transition programs within Navy Medicine.

LIST OF ACRONYMS AND ABBREVIATIONS

DMDC	Defense Manpower Data Center
DNS	Director of Nursing Services
MPTE	Manpower, Personnel, Training, and Education
MTF	Military Treatment Facility
NC	Nurse Corps
OLS	Ordinary Least Squares
OPA	Officer Personnel Act
THCSRR	Total Heath Care Support Readiness Requirement

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I would like to begin with thanking the Navy and the Nurse Corps for being such a source of support and inspiration to me. Words cannot express my gratitude for what these incredible organizations have done for me and my family. I would also like to thank my children, my parents, and my friends for all their support and love during this program. For having endured the brunt of my frustration and exhaustion, I love you all.

Professionally, I would like to acknowledge the individuals who were instrumental in the development of this thesis. Without their guidance, wisdom, and willingness to share information, I would never have been able to complete this document. There is such a large number of individual who assisted, so I will limit it to those with whom I dealt the most. CAPT Lisa Houser, thank you for your belief in me and for sharing the same vision for this thesis. CDR Larry Bateman, thank you for being my Shell Answer Man and for your unwavering support and accessibility. Professors Steven Mehay and Bill Hatch, thank you for your countless hours of editing and feedback. And, lastly, thank you to my classmates for listening to my endless babble about my thesis without a negative word or roll of their eyes.

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I.   INTRODUCTION

A.   OVERVIEW

The profession of nursing has evolved since the time of Florence Nightingale. Today's nurses are far more than the doctor's hand maidens of old. They are highly skilled, specialized and technologically savvy professionals. They are also an overworked, burned out, and undermanned profession. These realities have led to a chronic problem for nurse retention.

Navy nursing is not unlike general nursing in that it also experiences retention problems. In fiscal year 2008, the Nurse Corps continuation rate after five years of active duty service is only 68 percent (Brusek-Kohler, 2009), equating to an average annual turnover rate of 32 percent. While this is an improvement from previous years, is still much higher than the 20 percent annual nursing turnover rate experienced in the civilian sector (Zurn, 2005; Smith, 2010).

There are many studies that explore the reasons for poor nurse retention (Hirsch, 2008; Simoens, 2005; Cheung, 2008). The evidence suggests a link between reduced retention, job performance and lack of motivation. Furthermore, a relationship appears to exist between job dissatisfaction and retention: the more dissatisfied the employee; the higher the possibility of quitting. According to Zurn et al., there are three factors that play a key role in nursing performance and, therefore, retention:

> The ability of staff to do their job; (their knowledge, skills and experience to perform the job: the capacity of 'can do' factors); the motivation of staff to put in effort to do the job (the ability or 'will do' factors); and the organizational support or opportunity to do the job well (availability of resources, the presence of policies and practices conducive to performance, physical and social environment) (C. D. Pascal Zurn 2005).

If one does not feel prepared to do the job, one will leave the job.

The purpose of education and training is to enable the learners to achieve the knowledge and skills required to perform their job. Baccalaureate-prepared nurses attain

the basic nursing assessment and critical thinking skills while in nursing school, but rely on on-the-job training to master the skill set and knowledge base necessary for their particular specialty. Therefore, it stands to reason that greater exposure to various disease processes and procedures and to higher acuity patients and larger patient census will improve a nurse's education and training and result in a nurse who is better prepared for the job.

The Navy has three types of facilities, major medical centers, mid-level and small hospitals, to which it sends new Nurse Corps officers for their first assignment. Each hospital provides a particular level of care, offers a selection of specialties, and has a nursing education program for new nurses. The hypothesis of this thesis is that assignment to one of the Navy's three major medical centers will increase a nurse's ability to perform assigned duties, provide training opportunities absent at smaller facilities and generate a more prepared Navy nurse thus increasing retention after the first active duty tour.

This thesis will examine how Nurse Corps officer retention is affected by a nurse's first duty station assignment. The thesis focuses on the major medical centers and the mid-level hospitals because the majority of new nurses are assigned to these types of facilities. A comparison of nurse intern programs at the military facilities to similar civilian hospitals' training programs will be conducted. Finally, the thesis will analyze historical Navy Nurse Corps retention data.

B.   BACKGROUND

Despite Navy nursing having been in existence for over 100 years, the Nurse Corps was not formally established until May 13, 1908, with the passing of Public Law No. H.R. 20471:

> The nurse corps (female) of the United States Navy is hereby established, and shall consist of one superintendent, to be appointed by the Secretary of the Navy, who shall be a graduate of a hospital training school having a course of instruction of not less than two years, whose term of office may be terminated at his discretion, and of as many chief nurses, nurses, and reserve nurses as may be needed: *Provided*, that all nurses in the nurse corps shall be appointed or removed by the Surgeon-General, with the

approval of the Secretary of the Navy, and that they shall be graduates of hospital training schools having a course of instruction not less than two years. The appointment of superintendent, chief nurses, nurses and reserve nurses shall be subject to an examination as to their professional, moral, mental and physical fitness, and that they shall be eligible for duty at naval hospitals and on board of hospital and ambulance ships and for such special duty as may be deemed necessary by the Surgeon-General of the Navy. Reserve nurses may be assigned to active duty when the necessities of the service demand, and when on such duty shall receive the pay and allowances of nurses: *Provided*, That they shall receive no compensation except when on active duty. The superintendent, chief nurses, and nurses shall respectively receive the same pay, allowances, emoluments, and privileges as are now and may hereafter be provided by or in pursuance of law for the nurse corps (female) of the Army (The Statutes at Large of the United States of America from December, 1907, to March, 1909. vol.35, pt 1 n.d.)

It wasn't until 1941 that the Nurse Corps became a staff corps and achieved full military privileges including the ability to rise to the rank of Admiral. The Nurse Corps of today is a far different Nurse Corps than they could have envisioned in 1908. "We are not the same Nurse Corps of our ancestry" (Brusek-Kohler, 2009).

Navy nurses are assigned to operational billets "via Surgical Companies, Surgical Teams, Shock Trauma Platoons, the Forward Resuscitative System, Fleet Hospitals, Expeditionary Medical Facilities, on Navy and Hospital Ship, and our Military Treatment Facilities at home and abroad" (Lescavage, 2005). Advanced education opportunities are yielding "clinical nursing leaders and future executives for Navy medicine who are business-savvy, operationally experienced and clinically adept" (Brusek-Kohler, 2009). The Navy Nurse Corps now has clinical subspecialties, advance practice nurses and officers with increased responsibilities and positions of authority, including Commanding Officers of Naval Medical Facilities.

As of February 2009, there were 2,826 active duty nurses (Nurse Corps Force Structures & Promotion Boards, 2010). This is lower than the 3,094 positions that were available in 2005 (Lescavage, 2005). There has been a steady decrease in the available number of Nurse Corps officer billets over the past several years. As in the Navy, the Nurse Corps continues to emphasize streamlining as a business model due to the current

trend in force reduction. Military medicine is expected to perform its missions with the same level of professionalism and quality with a smaller, more focused team.

The dual missions, peacetime and wartime, of military medicine create additional challenges to the Nurse Corp's commitment to operational readiness and providing excellent healthcare to family members and beneficiaries. Nurses are asked to deploy in record numbers and at earlier stages in their nursing careers. For example, at Naval Hospital Jacksonville, 19 percent of the Nurse Corps officers were deployed in the fall of 2009 (Schmidt, 2010) and up to one-third of the active duty nurses are deployed from the National Naval Medical Center in Bethesda, MD, (Leate, 2010).

Baccalaureate nursing programs train individuals for an understanding of basic nursing skills, anatomy/physiology and disease process. More intensive training is required once the nurse reaches the first duty station. The Nurse Corps and individual commands have established training programs to prepare Nurse Corps officers for their role in the organization. This training varies depending on the location and size of the facility.

Naval hospitals differ widely. Depending on the hospital size (number of beds), specialties offered (cardiology, orthopedics, nephrology), physician residency programs (Family Medicine, Surgical, Obstetrics/Gynecology), staffed units (Medical, Surgical, Intensive Care, Pediatric Intensive Care) and the number of beneficiaries treated, the new nurses will have varying degrees of exposure to disease process and patient acuity and census levels. This leads to an asymmetrical learning experience and preparedness for nurses depending on the hospital where they are first assigned.

C.   OBJECTIVE

This thesis will examine the effect of the first duty station assignment on Nurse Corps retention after the completion of first service obligation. It will focus on education and training differences at the various medical treatment facilities to which newly commissioned Nurse Corps officers are assigned and use an OLS regression to study the impact of the initial duty assignment on retention.

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D.   RESEARCH QUESTIONS

The Primary research question is this: Do nurses assigned to a major medical facility for their first tour of duty retain at a higher rate than those assigned elsewhere? Questions that are secondary to this research are:

- Do training practices between major medical centers and smaller facilities differ?

- How are the number of Nurse Corps Ensign billets determined and assigned?

- What is the current billeting method for Nurse Corps officer assignments for junior nurses?

- How are Ensign Nurse Corps officer manpower requirements are determined?

- What effect will downsizing of Navy Medicine and the dual nature of its mission have on assignment and training of newly accessioned Nurse Corps officers?

E.   SCOPE

The scope of the quantitative portion of this thesis will be limited to Nurse Corps officers who entered the Navy between the years of 1994–1998. In the qualitative portion, it will rely on quick polls of Directors of Nursing Services (DNS) and Nursing Intern Program Managers at various commands as well as interviews with their civilian counterparts at comparable civilian facilities to determine differences in assignments and training. It will also include interviews with the Nurse Corps Recruiting Program Manager, Detailers and the Nurse Corps Manpower Community Leader to determine the methods and criteria used for Navy Nurse Corps recruiting and assignment.

F.   METHODOLOGY

This thesis will combine quantitative and qualitative methods. The quantitative approach will use an OLS regression with data received from Defense Manpower Data Center (DMDC). This data will include all Nurse Corps officers on active duty from 1994–2006. The data will be restricted to only those who entered service between 1994–

1998, who will be longitudinally followed for 6 years. The qualitative portion will include, but is not limited to, interviews, Department of Navy documents, and general reports.

G.   ORGANIZATION OF THESIS

The organization of the thesis provides a description of the how the remaining chapters interrelate and what is addressed in each. Chapter II discusses the various recruiting programs and how the differences between them affect Nurse Corps officer preparedness for their initial duty station assignment. Chapter III discusses the various aspects involved with the detailing process. It examines manpower requirements, officer assignment and facility types. Chapter IV focuses on the goals and variety of education and training at the major medical centers, mid-level hospitals and civilian counterparts. It will discuss the similarities and differences in training across these facilities. Chapter V presents the quantitative analysis, including methodology, sample description, regression equation and results. This chapter includes a discussion about results interpretation and weaknesses in the analysis. Chapter VI summarizes the research and provides conclusions, makes recommendations, and suggestions for future studies.

II.   RECRUITING

Retention begins with effective recruiting. Identifying the type of individual who best fits within the organization increases the possibility of retaining that individual later. Recruiting is a key challenge for health policy-makers and should be positively addressed. Job turnover rates or leaving the workforce is a good indicator of recruiting difficulties (Pascal Zurn 2005). The Nurse Corps relies on many methods to seek out and recruit individuals. These individuals must be a good clinical fit for the Navy Nurse Corps, in support of its primary missions of troop readiness and caring for the families and retirees. They must possess the skill sets necessary to meet the future goals and directions set by Navy Medicine, such as humanitarian missions. "Basing manpower requirements on current and projected war fighting needs will ensure we meet today's operational requirements while continuously updating and balancing the workforce as needs change (Admiral Michael Mullen 2007). To do this, the Nurse Corps must have nurses who are prepared, both clinically and militarily to meet the Corps and Navy Medicine's obligations. As Rear Admiral Lescavage, USN, former Director of the Nurse Corps, stated, the goal is "to specifically shape Navy nursing with the right number of nurses with the right training in the right assignments at the right time." (Lescavage 2005).

Nurse Corps recruiting faces challenges that may not be present with operationally focused officer recruiting. There are no true civilian equivalents to a Surface Warfare Officer, unlike nurses who have many civilian career opportunities. As Captain Catherine Wilson, USN (ret), the former Commanding Officer of Naval Hospital Bremerton, so aptly put it, "military medicine is the only HMO that goes to war" (Wilson 2006). Recruiters have the challenge of finding nurses who are professionally sound as well as emotionally, physically and intellectually capable of military life. The Nurse Corps requires nurses who have leadership skills, critical thinking ability and case management in addition to strong clinical skills (Martin 2001).

Many economic factors play key roles in recruiting success or failure. When the economy is strong, military recruiting is historically low, and vice versa. In fiscal year

2004, the Nurse Corps retained only 68 percent—63 out of 92 nurses—of the Active Duty recruitment goal (Lescavage, 2005). Contrast that to the recruiting numbers achieved during post-economic downturn the United States experienced in 2007–2008. Commander Gerald Springer, Nurse Corps Recruiting Program Manager, claimed that there are twice as many active duty direct accession candidates than there are positions allocated (Springer, 2010).

Having too many interested applicants creates its own set of problems. Nurse Corps recruiting incentives come in a variety of forms and with a limited dollar value. There is a finite amount of funding available for stipends and bonuses. These funds are allocated according to program enrollment and years of obligated service. Suffice it to say that available funds are limited, enrollments are regulated and each program intertwines with the other. For instance, the Nurse Candidate Program pays a stipend of $1000 per month for each month in the program. If the candidate is in the program for one year or less, there is a four year active duty service obligation and a five year active duty service obligation for a program length of greater than one year. Thus, an influx of participants signing up for greater than one year increases the money obligated to that program. There could also be a trickle-down effect on end-gain because of the delay in entry to active duty service (Springer, 2010). For example, two nurses can be recruited into the one-year Nurse Candidate Program for the same amount of money as one nurse in the two-year Nurse Candidate Program. Considering the increased costs of higher education and the high unemployment rates of recent years, it is conceivable that more students will seek out programs that will not only help pay for their education, but guarantee them a job upon graduation.

To support Admiral Michael Mullen's statement that the United States Navy "must revise and update its personnel policies and programs so that it is attractive to the desired talent base (Admiral Michael Mullen, 2007). and Admiral Gary Roughhead's acknowledgement that the Navy must target critical specialties among healthcare professionals (Admiral Gary Roughhead, 2009), the Nurse Corps has identified four advanced practice nursing and clinical specialties to target their recruiting efforts: mental health, peri-operative, mental health nurse practitioner, and critical care (Springer 2010).

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Because the nurses would not need to complete clinical training before entering active duty status, they would be commissioned through the direct accession program only. According to CDR Springer, critical care nurses are the easiest to recruit while mental health and peri-operative nurses are more difficult (Springer, 2010). One explanation for the difficulty is the requirement for professional specialty certification or completion of the Navy's peri-operative course. In the civilian workplace, certification ensures higher pay, thus making the nurse less likely to leave his or her current civilian employment.

Targeting these specialties is a new recruiting tactic and is still being analyzed. Therefore, goal totals are subject to change throughout the year and are reevaluated quarterly. If the "recruiting command is unable to recruit to these specialties then the goal is transferred to graduating students" (Bateman, 2010). This allows the Nurse Corps to be flexible and helps guarantee adequate recruiting for the year.

Recruiters are looking for more than just a clinically qualified nurse. They are looking for leaders. The Nurse Corps is no longer a "behind-the-scenes player" in Navy medicine. It is intimately involved in the changes of required operational, political and strategic capabilities. Nurses are serving on the front lines, and are the face of humanitarian missions and are expected to remain "versatile as visionary leaders, innovative change agents and clinical experts in all settings (Lescavage, 2005).

In his comments to the Subcommittee on defense of the House Appropriations Committee in February 2008, Vice Admiral Adam Robinson, USN, MC, Humanitarian Aassistance/Disaster Relief (HA/DR) missions, part of the Navy's Core Elements of Maritime Power said that, "create a greater synergy and opportunity for all elements of national power—diplomatic, informational, military, economic, joint, interagency and cooperation with non-governmental agencies" (Vice Admiral Adam M. Robinson, 2008). These missions are a "unique opportunity to positively impact the perception of the United States and our allies by other nations" and "serve as examples of how increased collaboration between host nations, the other services, other government agencies and non-governmental agencies" can successfully work together (U. M. Vice Admiral Adam M. Robinson, 2009). Navy nurses have a larger role than just as care-givers. They often present the first and most

lasting impression of the United States. The qualities and attributes essential for diplomacy and ambassadorship need to be present in each Nurse Corps Officer.

The Nurse Corps has extensive and detailed criteria for new officers. Each of the commissioning sources has its own selection process, but all are highly competitive and actively seek out the most qualified applicants. Evaluation criteria guidelines for the Direct Accession program consist of five categories: Personal Qualifications, Professional Growth and Accomplishments, Leadership, Skills Competence, Nursing Skills Competence, and Academic Performance (Brusek-Kohler, 2005). Consideration of each category is made in the decision to accept the candidate. Each category contains several attributes and qualifications as seen in Appendix A.

The selection process for each accession source is chronologically and incrementally different. For an example, this thesis will explore only the process for the Nurse Candidate Program, Direct Accession, and Recall Reservists applicants as the steps in each are identical. Figure 1 outlines the specific qualification progression of an applicant's file. The entire process can take several months to complete and is continuously on-going and dynamic. Unlike promotion or Nurse Corps Duty Under Instruction (DUIN) boards, which meet only annually, the Nurse Corps Professional Review Board, which is managed by the office of the Nurse Corps, Code MIC-5, meets at least twice a month or as determined by the Senior Member (Kohler, 2005).

As mentioned earlier, there are several avenues to becoming a Nurse Corps Officer. This research will discuss the six pathways that supply the majority of accessions: Direct Accession (DA), Nurse Candidate Program (NCP), Interservice Transfers (ITS), Medical Enlisted Commissioning Program (MECP), Seaman to Admiral –21 (STA-21), Reserve Officer Training Corps (ROTC), and Recalled Reservists. Each commissioning sources has quotas and limits on the number of candidates to be selected. While ROTC, MECP and STA-21 are legitimate avenues to becoming a commissioned officer, they do not follow the same recruiting guidelines and have the same quota ceilings. It is important to remember that the candidate totals can fluctuate depending on the number of qualified applicants in each category. Table 1 details the active duty quota goals for several of the commissioning programs:

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Figure 1.   Qualification Process for Active Duty Direct Accession Nurse Corps Officers
Nurse Candidate Program/ Direct Accession/ Reserves/ Recalls

Table 1. Active Duty Nurse Corps Recruiting Quota FY10 (From Springer 2010)

Commissioning Source	Specialty Code	Specialty	Quota
Recall	--------	------	10
Direct Accession (DA)	1900	General Nurse	65
DA	1930	Mental Health	10
DA	1973	Mental Health Nurse Practitioner	5
DA	1960	Critical Care	7
DA	1950	Peri-operative	7
Nurse Candidate Program (NCP) One-Year	------	------	10
NCP Two-Year	------	------	65
Total	------	------	179

A.   DIRECT ACCESSION

The Direct Accession program focuses on new graduates and experienced registered nurses. These candidates are required to have a current state nursing license in good standing. The mission-critical specialties identified by the Nurse Corps as a recruiting priority are the main target demographic for this program. These Direct Accession candidates are eligible for the Nurse Accession bonus and Health Professional Loan Repayment Program, depending on the length of obligated service to which they commit (Bateman, 2010). Table 2 shows the breakdown of Nurse Accession Bonus amounts and Health Professional Loan Repayment, based on length of obligated serviced.

Table 2.   Nurse Accession Bonus and Health Professional Loan Repayment for
Direct Accession Candidates

Years of Obligated Service	Nurse Accession Bonus	Health Professional Loan Repayment
3	$20,000	N/A
4	$30,000	N/A
5	$20,000	$40,000

B.   NURSE CANDIDATE PROGRAM

The target population for the Nurse Candidate program is nursing students who are enrolled in accredited baccalaureate degree nursing programs. The goal is to get active duty commitment obligations 12–24 months prior to graduation. The students are accepted into the program no earlier than the beginning of their junior year in college. This is the end of the general education courses and the beginning of the nursing instruction portion of their education. Nurse candidate participants receive a $10,000 bonus and $1,000 per month for the duration of their participation in the program. In FY09, the Nurse Corps was given the authority to increase the number of bonuses and stipends if necessary. Currently the program is meeting its funded goals (Bateman, 2010).

C.   INTERSERVICE TRANSERS

The identified demographic for the Interservice Transfer Program is nurses who are currently members of the Army or Air Force. The Nurse Corps does not actively pursue individuals for service transfers, so the number of accessions each year is very small (Springer, 2010).

D.   MEDICAL ENLISTED COMMISSIONING PROGRAM

The Medical Enlisted Commissioning Program (MECP) "targets highly motivated sailors for commission as a Nurse Corps Officer" (Bateman, 2010). While they are able to maintain their current rate pay and applicable allowances, candidates are required to

self pay for their education. It is permissible to use their GI Bill and any scholarships for which they qualify. They can attend any National League for Nursing accredited baccalaureate nursing program.

The total number of billets authorizations is 150, which equates to approximately 50 starts per year. The competition for this program is aggressive and placement is highly prized. It is open to all enlisted personnel of any rating. Upon commissioning, appointees "incur an eight-year active-duty obligation…four of which must be served on AD" (Military Enlisted Commissioning Program, 2010).

E. SEAMAN TO ADMIRAL–21

The Seaman to Admiral program (STA-21), like MECP, targets highly motivated sailors for commission as a Nurse Corps Officers. Sailors maintain current rate pay and applicable allowances while in the program. Unlike MECP, it pays an additional $10,000 is provided to aid in the expense of tuition, books and fees. STA-21 requires candidates to participate in the University or College's ROTC program. Participation is limited to those schools with affiliated ROTC programs.

F. RESERVE OFFICER TRAINING CORPS

Navy Reserve Officer Training Corps (ROTC) offers nursing students the opportunity to get a bachelor's degree and naval commission while studying nursing. Participants are obligated to attend all ROTC rotations including Midshipman tours aboard US Naval vessels.

ROTC scholarships cover tuition, textbooks and other related educational expenses. The program also provides a monthly living allowance that gets higher each year a student is in the program (NROTC: More than Just Tuition, 2010). See Table 3.

Table 3.   Monthly Living Allowance for ROTC Participants

Year in School	Freshman	Sophomore	Junior	Senior
Living Allowance	$250.00	$300.00	$350.00	$400.00

G.   RECALL RESERVISTS

The Recall Reservist program allows Reserve Nurse Corps Officers to return to active duty. There are two categories of recalls: indefinite and definite. Indefinite recalls are the ones typically used. The goal is to authorize recall of officers the rank of Lieutenant or below, but the certifying board will review Lieutenant Commanders on a case-by-case basis based on the current needs of the Nurse Corps (Bateman, 2010). Ranks within the Nurse Corps are restricted due to the Defense Officer Personnel Management Act (DOPMA) constraints. "Congress specifies in DOPMA the number of officers it would allow in each field above 0-3" (Rostker, 2007).   Therefore it may not be possible to enter at a higher rank as they may already be at maximum capacity.

H.   SUMMARY

Retention begins with good recruiting. The Nurse Corps faces many challenges in attracting high quality, motivated, mission-critical specialty trained and novice nurses to be the leaders in its continually evolving political, humanitarian and clinical roles. The Navy faces a multitude of challenges with a variety of programs designed to assess the most qualified candidates as the next generation of Nurse Corps officers. According to CAPT Susan Woolsey, NC, the Nursing Assignment Officer at the National Naval Medical Center, today's nurses are more motivated and eager to meet the deployment and clinical requirements than any other cohort with whom she has worked (Woolsey, 2010).

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III. NURSE CORPS ASSIGNMENT

A. INTRODUCTION

Like the practice of medicine, officer assignment is both an art and a science. Ensuring the right number of qualified officers go to the right command and in the right time frame requires an understanding of future manpower needs, officer inventory, and billet spaces at each command; while considering an individual officer's placement preference and career milestones. Assignment Officers place nurses at facilities where they can receive the most training during the critical first assignment. Not all facilities offer the same education and training opportunities and deployment rates are high across several sub-specialties in Navy nursing making the Detailer's job even more challenging.

To better understand detailing, one must understand how Navy Medicine's manpower requirements are determined, funded and inventory are distributed to the various Medical Treatment Facilities (MTF). This thesis will explore the creation of Navy Medicine's manpower guide, the Total Health Care Support Readiness Requirement (THCSRR) process and how it influences manpower requirements at MTFs. The chapter will also review how manpower end-strength is affected by the Defense Officer Personnel Management Act (DOPMA). Lastly, Chapter III will explore the specifics of the detailing process.

B. TOTAL HEALTH CARE SUPPORT READINESS REQUIREMENT

The development of THCSRR is a complicated maze full of politics and justification of Navy Medicine. The dual nature of Navy Medicine is composed of wartime and peacetime missions, has made manpower issues difficult to argue. The primary responsibility of the United States Navy is defense of security policy. Medical's role is ensuring that the military is physically and mentally healthy for all assigned missions. The peacetime mission is the care of families. There are a number of places where the manning of a Military Treatment Facility (MTF) is considered part of the

primary mission. This is reserved for MTFs in remote areas and Oconus where no adequate civilian facilities are available for family members (Copenhaver, 1994).

There is so much information available about the development of THCSSR; it can and has filled several theses. This thesis will examine other research to explain THCSRR. The purpose of reviewing Manpower requirements for this thesis is to provide an overview of the main points and not the particulars of the policies that created or are included in THCSRR. Only a cursory summation is presented along with information on references for a more in depth look at the development of Medical Readiness policy.

THCSRR is the result of many studies and models of medical readiness. In 1991, Congress asked DoD to assess medical personnel needs. The result of this study, commonly known as "733 Study," is located in section 733 of the National Defense Authorization Act for Fiscal Years 1992 and 1993. The study was designed to "determine the size and composition of the military medical system needed to support U.S. forces during a war or other conflict and identify ways of improving cost-effectiveness of medical care delivered during peacetime" (Commitees, 1996). Released in 1994, the 733 Study stated that there should be a 50 percent reduction of physicians by fiscal year 1999. This number was generated by using a model of treating casualties based on the Defense Planning Guidance (DPG) of fighting two simultaneous Major Theater Wars (MTWs) (Dyer, 2003). The report stated that there were more than enough medical personnel to provide care for the wartime mission. It also acknowledged that if the DoD can provide healthcare for the peacetime mission at a more cost-effective manner than the civilian counterpart, then the military system should be maintained or expanded. If not, then the primary mission must remain the wartime requirement and the peacetime mission should be delivered by the civilian sector (Bateman, 1999).

Navy Medicine disagreed with the findings of the 733 study, stating that it neglected to account for training requirements, oversea hospital requirements and a rotation base to sustain these operations (Dyer, 2003). Its response was to conduct its own study using different assumptions and estimated a 16 percent decrease of total active duty personnel and only a 4 percent decrease in active duty physicians (Dyer, 2003).

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DoD responded with a follow study, later known as the "733 Update Study," which agreed that the original estimate presented in the "733 Study" underestimated the necessary manpower needs of Navy Medicine. It did not, however, agree with the Navy's higher estimates. The result was a compromise between the two estimates: 72 percent of active duty strength was necessary.

THCSRR is the result of combining several operational requirements. The first component of THCSRR is the Medical Operational Support Requirement (MOSR). MOSR is the union of the 733 Wartime manpower requirements and the Day-to-Day operational requirements. Combining MOSR and Sustainment conditions, needed "to maintain the readiness manpower requirements for future years" creates THCSRR (Bateman, 1999). Figures 2 and 3 illustrate the development of THCSRR.
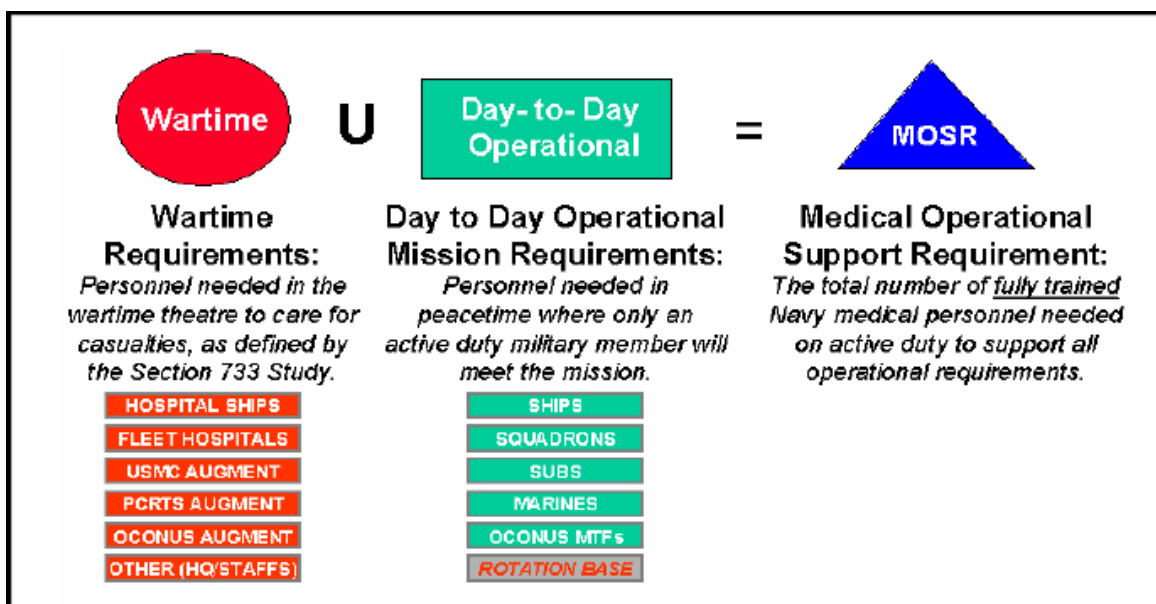

Figure 2.   Medical Operational Support Requirement (MOSR) From (Dyer, 2003).

While not perfect, THCSRR provides many benefits. It incorporates sustainment requirements for future manning needs, and the following six additional benefits:

1.   Flexibility, the model is able to accommodate changes in mission statements in both the peacetime and wartime focus areas.

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2. Visibility, the model illustrates the impact of mission or priority changes down to the subspecialty level.

3. Validity, the model has imbedded within it other accredited and registered DOD/DON models and has been tested during DOD/DON level simulations/wargames.

4. Durability, the model has been revised and re-run several times since its inception to allow for mission, manpower, and/or policy changes.

5. Applicability, this model has been essential in Navy Medicine's determination of other initiatives such, IG/CA, all personnel plans & the Above THCSRR Modeling Project.

6. Credibility, this model has recently (2002). been adopted by OSD/HA(TMA) for use in determining the entire military medicine manpower readiness requirement, especially as it applies to the needs of the Army and Air Force Medical Departments. As of June 2004 N12 has confirmed the tenets of the model and approved its continued use (Navy, 2003).

MOSR + **Sustainment** = **THCSRR**

Medical Operational Support Requirement: *The total number of fully trained Navy medical personnel needed on active duty to support all operational requirements.*

Sustainment: *The number of medical personnel needed in training to support all officer and enlisted communities, based on known attrition rates. Also includes those in transit and other temporary states.*

Total Health Care Support Readiness Requirement: *The number of Navy medical personnel needed on active duty*
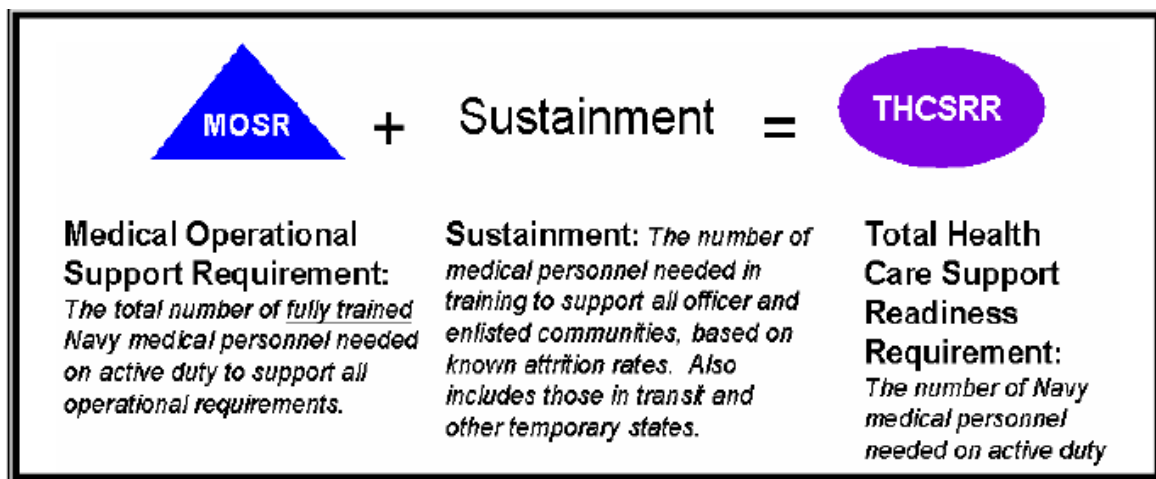
Figure 3.   Total HealthCare Readiness Requirements Model (From Dyer, 2003).

C.   MANPOWER, PERSONNEL, TRAINING, AND EDUCATION

Manpower, Personnel, Training, and Education (MPTE) plays a critical role in the Navy's strategy by processing "the degree of 'Readiness' attained for deterring threats and/or winning wars" (Manpower, Personnel, and Training: An Overview, 2010). By using the guidelines in OPNAVINST 1000.16K, MPTE creates manpower management, which is a methodical process for determining, validating and using manpower requirements as a basis for:

- Budget decisions
- Determining manpower authorization priorities based on available funding and personnel inventory, and
- Linking all these factors together (Manpower, Personnel, and Training: An Overview, 2010)

For the purposes of this paper, the focus will be contained to determining manpower authorization and the determination of billets at specific commands.

To create an authorized billet requires many steps. A mission and its manpower requirements must be identified and then funded. Once authorization occurs, the requirements can be entered in the Total Force Manpower Management System (TFMMS). TFMMS is the single, authoritative repository for:

- Total force manpower requirements
- Active Duty Manpower Personnel
- Navy/Reserve Personnel
- Navy and Manpower Authorizations, and
- End strength (Total Force Manpower Management System (TFFMS), 2010

The set of requirements now goes to the Planning phase for strengths, community managers, recruiting and training needs.   The billets are then identified and distributed to the mission where they can be filled by personnel. The entire process is illustrated in Figure 4. Once the billet is identified, the Detailer is responsible for filling the billet.
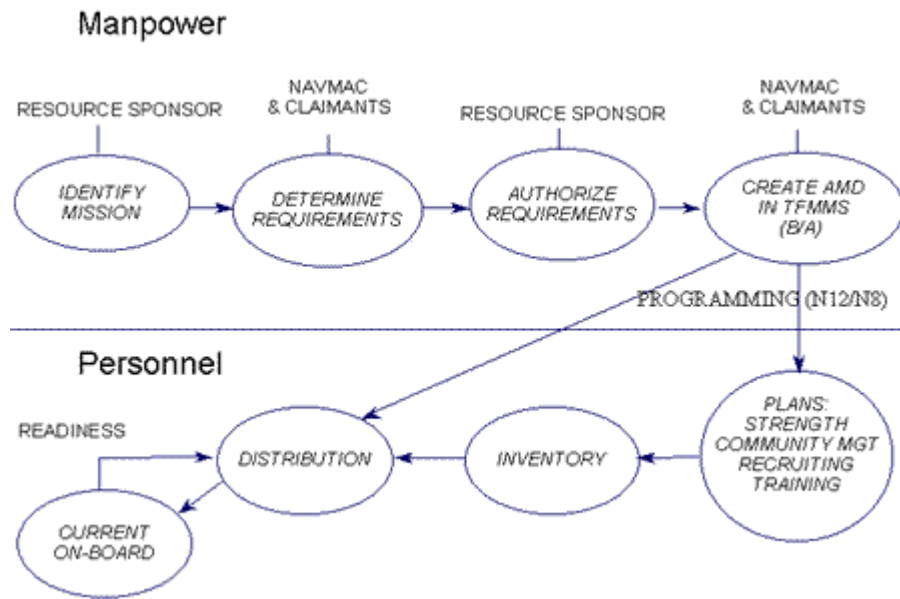
Figure 4.   Billet Creation Process (From Manpower Requirements, 2010)

Simply put, there are three components to billet creation: requirement, authorization, and end-strength. The Manpower Analysis Center defines the requirement, the Chief of Naval Personnel's office authorizes the billet, and Congress mandates the number of officers in each rank. All three have to be in place for a billet to be created.

D.   DETAILING

Detailing is the process of assigning service members to billets. The goal is to match the right officer with the right job at the right time, echoing the goals of the Nurse Corps (Brusek-Kohler, 2009). The Nurse Corps Detailing Office is comprised of several Detailers with divided specialty, rank distribution and region responsibility. The East Coast Junior Officer Detailer is responsible for detailing all new accessions to the Nurse Corps.

Between 2003–2005, the Nurse Corps did not reach its recruiting goals and in the past few years has failed to meet its retention goals, resulting in a shortage of Lieutenants. In an attempt to decrease the shortage, recruiting goals have increased. This will bring more Ensigns into the Nurse Corps, which, in theory, will increase retention numbers, if not percentages. The current billet structure does not reflect the increased

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numbers of Ensigns in the system. The effect is an overage of Ensigns at all levels of MTF. For instance, National Naval Medical Center in Bethesda, Maryland has billets for 50 Ensigns, with 88 on staff and Naval Hospital Bremerton in Bremerton, Washington has eight on staff and is only billeted for one. The additional inexperienced nurses create a burden on Navy Medicine's education and training departments and, in particular, the New Graduate Nurse Intern programs that assist new graduate nurses with their transition from novice to expert nurse.

When Ensigns fill Lieutenant Junior Grade and Lieutenant billets, there is a reflection of a higher level of experience and skill on paper, while it is lost in practice. It also forces the commands to utilize the new graduates in positions that are past their clinical expertise. This discrepancy affects staffing ratios, training opportunities and has a direct affect on patient care.

E.   SUMMARY

Ensuring the proper fit of officer and job is essential to mission success. This process is not as simple as it may seem. It requires extensive knowledge of how Navy Medicine's manpower requirements are determined, funded and inventoried.   The progression is further complicated by the Navy Medicine's deployment tempo, dual mission, and education opportunity variations among military treatment facilities.

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IV.   EDUCATION AND TRAINING

A.   INTRODUCTION

Nursing shortages, increased patient acuity and staff overtime contribute to management wanting new nurses to "hit the ground running." New nurses are expected to perform at levels equal to more seasoned professionals (Romyn, 2009). This is both unfair and unrealistic. There is an education and training gap between practicing as a student nurse and a novice nurse. This marginalization has a causal relationship with the high rate of attrition of new nurses from professional nursing (Duchscher, 2004). "There is a consensus within the literature that graduate nurses require a transition period before becoming fully competent to practice in the clinical role" (Krugman, 2006). High quality orientation programs and an adequate period for transition from school-to-work are critical components for retaining and fostering competence in new graduate nurses (Scott, 2005). Nurse Corps officers face the additional challenges associated with deployments, frequent permanent-change-of-station (pcs) transfers, and numerous work site changes not required of their civilian counter parts. Having a solid clinical base is crucial for Nurse Corps officers to maintain the clinical flexibility essential to mission completion.

Chapter IV will define marginalization and its applicability to new graduate nursing; examine the transition period from novice to experienced nurse; explore the necessity and development of nursing intern programs in the development of nursing intern programs and look at two different conceptual transition models. Lastly, Chapter IV will contain a comparison and contrast of nurse intern programs at the Navy's three major medical centers, two Navy mid-level hospitals and three comparable civilian facilities.

B.   MARGINALIZATION

Marginalization means to place in a limited position of importance, influence or power (Webster's New Universal Unabridged Dictionary, 2003). For purposes of this

thesis, the definition will be specific to the gaps between newly graduate nurses and expert nurses and between "Generation Y" and older generations of workers.

Marginalization happens when new nurses hover between being a student and being a professional; not truly feeling a part of either group. During this initial adjustment phase, they experience feelings of anxiety, insecurity, inadequacy, and instability (Duchscher, 2008). It is unclear how long this initial period lasts. Each new graduate nurse comes into the profession with a different demographic background, educational level, and life experience. Some may have previous clinical nursing experience as a Certified Nursing Assistant or a Licensed Practical Nurse. People in their 30s have a different perspective than people in their 20s. Most of the literature has the marginalization phase lasting from six to eighteen months (Duchscher, 2004; Kramer, 1974). By that time, the new nurse has fully integrated into a full-fledged member of the heath care team.

Practicing as a nursing student is far different than as a professional. The academic world presents the "ideal" circumstances for clinical practice. Student nurses have limited responsibilities and the luxury of time for research and clinical care. The reality of the professional setting leaves the new nurse grappling with the "contrast between relationships, roles, responsibilities, knowledge, and performance expectations" (Duchscher, 2008).

Because the transition is marked by confusion, exhaustion and doubt, many new nurses find it difficult to maintain the standard of practice they achieved while in school. This leads to frustration and guilt about not being able not being able to meet the basic requirements of their profession. According to Duchscher, there are three primary fears for the graduate nurse during this time: "(1) being 'exposed' as clinically incompetent, (2) failing to provide safe care to their patients and inadvertently hurting them, and (3) not being able to cope with their designated roles and responsibilities" (Duchscher, 2008). Figure 5 shows the Transition Shock Conceptual Framework that identifies the gaps between the newly graduated nurse and the more seasoned professional nurse.
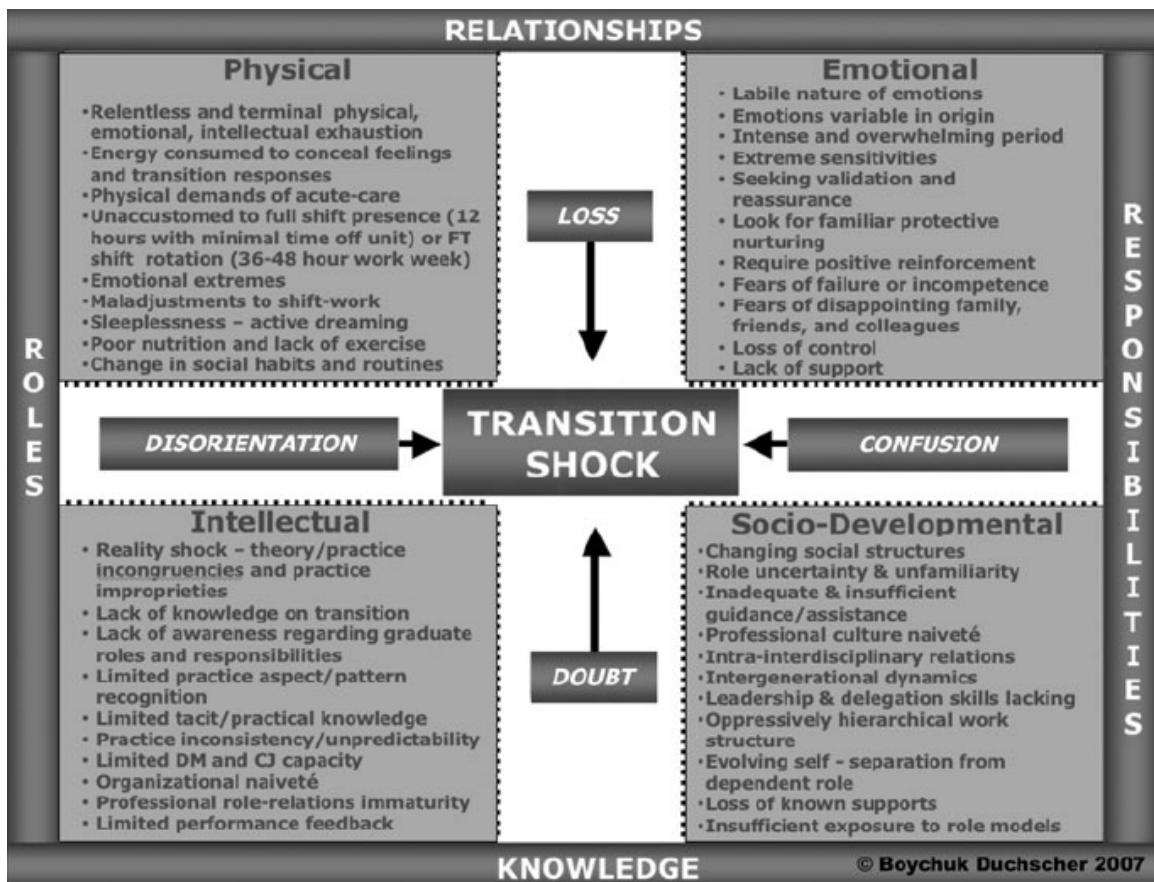
Figure 5. Transition Shock Conceptual Framework (From Duchscher, 2008)

The marginalization between these groups and the subsequent closing of it can also be described as a rite of passage. Once training is complete, the new nurse can claim professional status. This journey is often characterized by oppressive behavior. Numerous authors claim that nurses experience intra-professional dissention and interpersonal conflict (Duchscher, 2006). Manifestations of these issues include the saying "nursing eats their young" and the older nurse sending a new nurse into a recently expired patient's room for "morning care" without telling the new nurse the patient is dead (Ross, 1995).

Marginalization is not restricted to the gap between newly graduated nurses and more experienced professionals; it also refers to the differences between the generations. The literature states that now is the first time in the history of nursing where it is possible to have four generations, each with its own divergent approaches to work and

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communication, in the same facility (Duchscher, 2004). The four generations are: Veterans (1925–1945), Baby Boomers (1946–1964), Generation Xers (1965–1980), and Millennials (also known as Generations Yers) (1981–present). The different personal and professional management styles of each generation can be sources of conflict and confusion for each other generation. For instance, Veterans come from a militaristic and utilitarian tradition that demands a more hierarchical approach to the workplace, while GenYers expect to be treated as equals and appreciated for their intellectual abilities (Duchscher, 2004). The generational cohort profiles are provided in Figure 6.
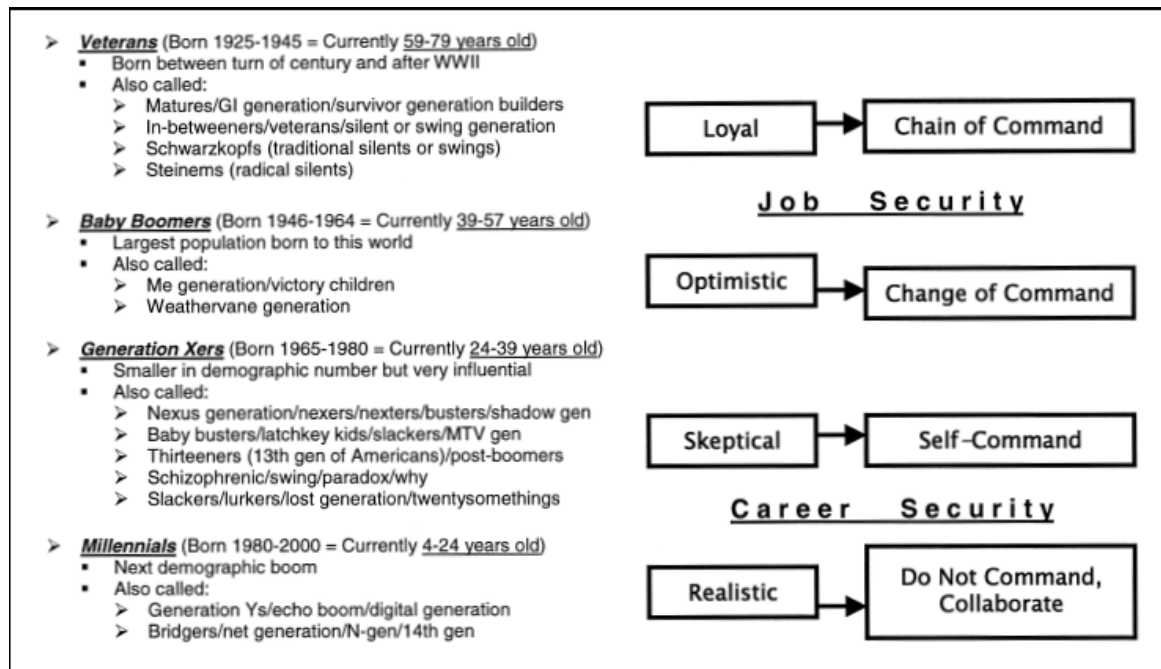
Figure 6.   Generational Cohort Profile (From Duchscher, 2004)

The effects of marginalization occur when the cohorts are unable or unwilling to see things from the other's perspective. "Generational differences, including the potential for misunderstanding and conflict, cannot be ignored" (Romyn, 2009). Generation Xers see Veterans as being resistant to change and Baby Boomers unwilling to share leadership responsibilities, while Generation Xers and Millennials are seen as not

being team players in their desire to have a balance between work and home (Duchscher, 2004). Generation Xers and Yers both need the opportunity for empowerment and career development (Marshburn, 2009).

Marginalization results in new nurses feeling inadequate and dissatisfied. Studies have identified that retention is not just a matter of how motivated a nurse is for the job; it is also a matter of how prepared and trained they are for the job (Zurn, 2005). Reducing the effects of marginalization through longer orientation periods and communication training for all staff will have a positive effect on retaining new nurses.

C.   TRANSITION

The first year of practice after graduating nursing school is filled with challenges for the new nurse. A lack of clinical knowledge and confidence in nursing skills, the ability to form relationships with peers, handling workload demands, learning how to prioritize and organize their tasks related to care giving and developing their role as a professional while interacting with physicians are some of the obstacle new graduates face during this first year (vanWyngeeren, 2010) . This growth process is also known as transition.

Years ago, nursing school served not only as a training ground for nurses, but also provided free labor to area hospitals. Students were required to work at least sixteen hours per week as part of their training (Jensen, 2010). Duties such as recording vitals, positioning patients, changing linens and emptying bedpans were part of their routine. Their position in the healthcare team was innocuous, but their contribution was invaluable. Today that work would be done by the paraprofessional nursing staff: Medical Assistant, Certified Nursing Assistants and Licensed Practical Nurses. The following passage illustrates what it was like to be a nursing student at the University of Colorado in 1957.

> We were assigned to, as the nurses 'lovingly' referred to as the 'vegetable patch,' to learn about positioning patients in vegetative states. This was done to alleviate bed sores, drop foot and other physical stressors associated with not being able to move. We'd use sandbags to place patients in the right positions. We would come back the next day to find

all the bags removed and the patients repositioned because the night nurses didn't think it was necessary. They didn't think these patients were going to survive anyway. They didn't care. (Jensen, 2010)

As difficult and seemingly meaningless as the work was, the training was a type of initiation into the world of nursing; a rite of passage.

Nursing schools today are vastly different than the baccalaureate programs of 50 years ago. In 1957, nursing school was a four-year program. Nursing education began in freshman year. Today, nursing programs are limited to the Junior and Senior years in college. The first two years are dedicated to general studies and prerequisites for the nursing program, such as: Organic/Inorganic Microbiology, Statistics and Anatomy and Physiology. While in the nursing program, students receive both traditional classroom education and practical clinical experience. Unlike in 1957, the student does not work on a unit, but rather follows a single patient for a day, concentrating on disease process and patient care planning. It is an exercise in critical thinking, but offers little in the way of actual hands-on nursing, prioritization of care for multiple patients or time management; all of which are essential skills for professional success.

Another change in nursing transition came about when the nursing licensure test, National Council Licensure Exam for Registered Nurses (NCLEX) became computerized. To obtain a license to practice nursing, each graduate must take an NCLEX test, which tests for nursing clinical judgment, critical thinking skills and general medical knowledge, such as medication classifications and basic anatomy. Prior to computerization, the NCLEX was a very comprehensive and long test; taking four days to complete and several months to receive notification of licensure. During this waiting period, graduate nurses were hired in a non-independent role. They worked side-by-side with and under a licensed professional, learning professional nursing without having the weight of clinical and legal responsibility of the care on their shoulders. New nurses are expected to perform at levels equal to those of seasoned professionals while also learning the employer specific policies and procedures (Romyn, 2009).

Any debate about transition would be incomplete without discussing the changes in technology, increased nurse-to-patient ratios and higher inpatient acuity that have

occurred over time. "Difficult elements of the transition process for newly graduated nurses have survived…changes in health care delivery methods and enhancement of technologies, and our emphasis on quality care management through tout the acute care institutions of North America" (Duchscher, 2004). Nursing is now a highly technological profession. Hospitals are filled with equipment that require advanced training to use properly, but are a part of the everyday workings of a clinical unit. Newly graduated nurses may have little or no experience with the equipment that is vital to their ability to perform their duties.

Due to chronic understaffing and limited insurance benefits for qualified beneficiaries, the nurse-to-patient ratio and in patient acuity levels have risen. The patients in the hospitals are sicker and their length of stay shorter than in any time in history. In 1979, status-post coronary by-pass (CABG) surgery patients would stay in the Coronary Care Step-Down Unit for at least a week while not getting out of bed for most of that time. Whereas today, those same patients are out of the bed, sitting up in a chair within hours of surgery and sent home 48 hours post surgery. Another extreme example is the medical management of appendicitis. In 1945, uncomplicated status-post appendectomy patients would remain in the hospital, flat on their backs, for a week and spend months at home recovering. Today, the surgery is done as a same-day surgery procedure and patients return to work two weeks later. These examples demonstrate not only the advancements in technology but also the changes in care management. There are no changes in the risk for infection or complications from surgery, the post-operative care education needed by the patient, or the necessary physical care given to the patients that are the responsibility of the nurse. There is only less time for the nurse to evaluate and treat possible complications, teach patients essential self-care information, resulting in the need for critical thinking and clinical skills to be highly developed. This takes time and experience.

D.   CONCEPTUAL TRANSITION MODEL

The transition period is comprised of a set of sequential phases identified by their respective emotional and professional development. There are as many conceptual

transition models as there are experts who write about them. While the specifics may vary, the basics remain virtually identical. The two models outlined in this thesis are representative of the literature and serve as an appropriate basis for comparison. The models are Patricia Benner's Dreyfus Model and Judy Duchscher's Transition Stages Model. The Dreyfus model focuses on clinical skill as the yardstick for transition, while the Transitions Stages Model centers on the emotional maturation of the new nurse and how that translates to their clinical practice.

1. Dreyfus Model

The Dreyfus Model identifies five phases of professional development of newly graduated nurses to expert nurses based on the skill acquisition. The phases are: novice, advanced beginner, competent, proficient and expert (Romyn, 2009). Each of the phases is characterized by certain clinical skills and professional maturity; each building on the previous. The necessary time to complete the five phases is individually paced, but it is estimated to take the first two years of practice to master the role tasks and preserve the moral integrity that identifies an expert nurse (Romyn, 2009). Having the knowledge and tasks ("knowing how"), which is achieved during the first four phases is prerequisite to learning theory ("knowing that") (Dracup, 2004). Three aspects of skills acquisitions are being monitored during the five phases:

1. One is a movement from reliance on abstract principles to the use of past concrete experience as paradigms.

2. The second is a change in the learner's perception of the demand situation, in which the situation is seen less and less as a compilation of equally relevant bits, and more and more as a complete whole in which only certain parts are relevant.

3. The third is a passage from detached observation to involved performer. The performer no longer stands outside the situation but is now engaged in the situation (Nolan, 2001).

a. Novice

The novice nurse is characterized by a rigid adherence to taught rules or plans, little situational perception, no discretionary judgment (Atherton, 2008), task

oriented and focused on skill acquisition (Romyn, 2009). These nurses have no clinical or life experience from which to draw and rely on the constant supervision of a preceptor. They require someone to tell them what to do so they can do it as they have no perception on how to judge a situation. They operate in a limited and restricted environment due to their rule-governed behavior (Nolan, 2001). It is not unusual for the novice nurse to take a considerable amount of time accomplishing the most basic of nursing tasks such as physical assessment and medication passing.

b. Advanced Beginner

The advanced beginner phase, beginning at the end of the formal orientation period, is defined by the newly acquired ability to formulate and act on principles (Romyn, 2009). These nurses still have a limited situational perception and require limited supervision (Atherton, 2008). To reach this stage, a nurse must have had some situational experience from which to base their clinical judgment, but still rely on more experienced nurses for guidance and confirmation. The advanced beginner nurse places equal value on all tasks and clinical information and has difficulty with prioritization of clinical care tasks, but is has begun to formulate the principles that guide clinical actions (Nolan, 2001).

c. Competent

The competent phase is marked by the nurse's ability to provide both routine and complex patient care with skill and confidence (Haag-Heitman, 2004). This phase occurs anywhere from 1–3 years of practice after the nurse has been exposed to a wide variety of clinical experiences and is exemplified by seeing actions in terms of plans, long-term or short term. For the competent nurse, a plan establishes a perspective, and the plan is based on considerable conscious, abstract, analytic contemplation of the problem. It is the conscious, deliberate planning that is characteristic of this skill level helps achieve efficiency and organization (Nolan, 2001). There is a risk for leaving the

profession if the nurse is unable to develop organizational awareness and support to deal with their increased personal expectations and the demands and realities of the workplace (Haag-Heitman, 2004).

d.   Proficient

Sound clinical skills, understanding of clinical situations, recognition curves of client's health patterns and the ability to interpret clues as relevant or irrelevant are the primary attributes of the proficient nurse (Romyn, 2009). They are able to perceive situations as a whole rather than parts and view them in terms of long-term goals (Nolan, 2001). Stagnation is the biggest risk during this phase. Learning and skill development of skills or specialty are critical to moving past proficient to expert (Haag-Heitman, 2004).

e.   Expert

The expert phase is characterized by a combination of advanced clinical skills and expertise, organizational awareness, participation in unit/organization policy and procedures, decision-making capabilities and promoting organizational learning with preceptorship (Haag-Heitman, 2004). They no longer rely on clinical guidelines for each intervention or assessment made because of the wealth of experience and knowledge they possess. At this phase, nurses can identify problems with the intuition that comes with having a vast amount of experience.

2.   Transition Stages Model

The Transition Stages Model was developed by Judy Duchscher, RN, PhD and has its basis in a research study that "revealed a staged experience of transition occurring over the initial twelve months of an introduction to professional practice" for newly graduated Kramer's book, *Reality Shock: Why Nurses Leave Nursing*. In the book, Kramer states that nurses go through a series of stages in dealing with the transition between a graduate nurse and a professional nurse during their first year of clinical practice (Kramer, 1974).

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The model is designed to be used by nurse educators, managers and hospital administrators who are seeking to integrate new nurses into their respective workplaces. Divided into three phases, the model identifies both, personal and professional, pathways and processes the nurse goes through during this critical time period. The pathways are not linear. Therefore, the transition model is somewhat fluid and phases can over lap at times. Each nurse must be treated as an individual and specific with learning needs and support identified for the successful transition to professional to occur.

The three phases of the Transition Stages Models are: doing, being, and knowing. Each are marked by different feelings and professional development that progress towards total clinical confidence and independence of practice. The model provides guidance to educators and managers for supporting the new nurse. The stages begin after the initial orientation to a new facility, which is considered a honeymoon phase due to the lack of true clinical responsibility and identification with nurse "ownership" of the workspace (Duchscher, 2007). Figure 7 illustrates the Transitions Stages Model.

a.   Doing

The Doing phase generally occurs in the first 3–4 months of clinical practice. During this time, nurses quickly realize that they are unprepared for the responsibility and workload of a fully trained nurse. The majority enter the profession with unrealistic goals and expectations (Duchscher, 2007).

The model stresses the need for close support of these individuals and not expecting them to carry full workloads. By establishing a formal mentor relationship with a more experienced nurse outside their workspace gives the novice a sounding board for both personal and professional issues. The new graduate is struggling from the adjustment associated with moving from student to professional and their lack of identity as a true part of the healthcare team. They feel alone and need someone with whom they can share those feelings (Duchscher, 2008).

During this phase, the new nurse is very task oriented. The focus is on completing the clinical tasks, not what is occurring within the organization. Because of the new nurse's difficulty with time-management and the lack of confidence in clinical skills,

tasks as basic as an assessment can take much longer for the novice than the expert, further confirming the novice's feelings of inadequacy. It is essential for new staff to be allowed to repeatedly practice the multitude of nursing skills in a range of clinical situations because it is unreasonable to expect undergraduate nursing programs to prepare graduates to competently perform all of the skills required in a contemporary acute-care workplace (Duchscher, 2008). An additional benefit to providing continual support is the team-building and trust that develops when working as a unit (Duchscher, 2008).
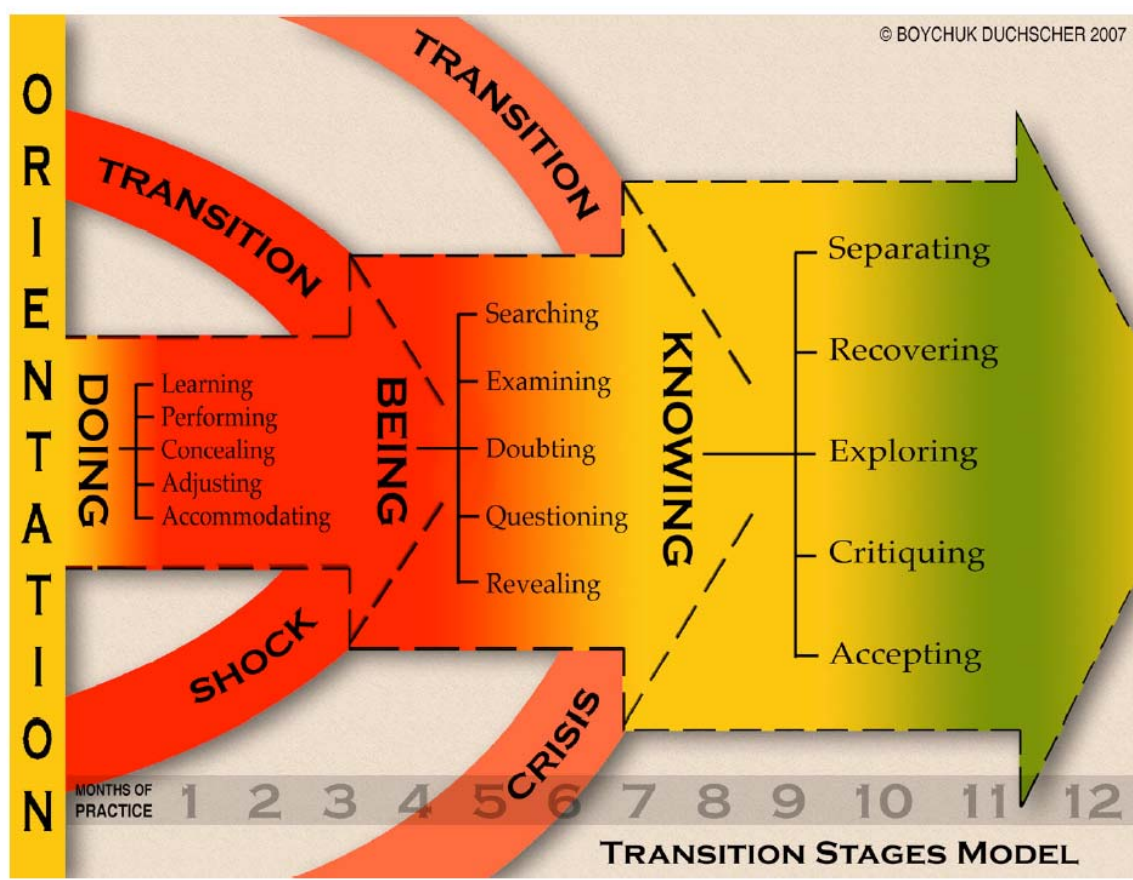

Figure 7.   Transitions Stages Model (From Duchscher, 2007)

b.   *Being*

The Being phase occurs during the 4–5 month of clinical practice and is marked by a consistent and rapid advancement in critical thinking skills, knowledge level

and skill competency (Duchscher, 2008). During this stage, the nurse is attempting to find a balance between their perceived clinical role and the one that actually exists. Feeling more relaxed and confident in the abilities, they are now able to start challenging why things are done a certain way, yet crave the absence of constant learning. They look for "familiarity, consistency and predictability" (Duchscher, 2008).

During this phase new nurses need a preceptor or mentor with whom they can get confirmation of their thought processes and actions. The nurse no longer needs someone to watch them work, but be available to them for questions or concerns. A delicate balance of supervision and independence is essential to prevent the new nurse from feeling smothered or abandoned. It is important to note that despite the relative clinical independence prominent in this stage, the nurse is not yet an expert and should not be given advanced responsibilities without adequate support, both professionally and personally.

In the latter stages of Being, the new nurse requires less physical, cognitive and emotional energy to perform their professional duties, therefore they are able to return to thinking about personal goals. "Within several months (i.e., at approximately 6–8 months PO [post-orientation] a rejuvenated spirit would reawaken a tempered interest in learning that would have them starting to seek out challenges to their thinking, putting themselves in new and unfamiliar practice situations and planning more long-term career pathway options" (Duchscher, 2008).

c.   *Knowing*

The final stage of the Transition Stages Model is the Knowing phase. It covers months 6–12 of the first year of clinical practice and focuses on developing separateness between the new nurse and experienced peers. The new nurse has achieved the skills, both clinical and critical thinking, required to be an independent practitioner on equal footing with more experienced nurses. Initially in their clinical practice, new nurses utilized friends and family as their primary source of support. During the Knowing stage, the support role belongs to nursing colleagues and coworkers (Duchscher, 2008).

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Unlike the earlier stages where stress was a predominate feeling, the new nurse feels only moderately stressed, contributing it to their individual capacity to cope with their roles and responsibilities rather than the lack of knowing exactly what are those tasks. However, many feel unsettled with their perceived position at the bottom of the medical profession hierarchy chain of authority and power (Duchscher, 2008).

Feelings of professional accomplishment are prevalent at this stage. Nurses recognize the difference in skill level, professional attitude and cognitive processes between them and more junior nurses. Being able to answer the questions rather than ask them is also indicative of the professional growth and development.

E.   COMPARISON/CONTRAST OF NURSE GRADUATE TRANSITION PROGRAMS

There is a plethora of research proclaiming the necessity of nurse graduate transition programs, also known as nurse intern programs or nurse residency programs. Professional nursing organizations and the nursing research literature agree on the key components of an effective component. There are guidelines for how the components are defined, but that is as far as the guidance goes. Recognizing the long-term ramifications with inadequate training, Congress, in its "Nurse Training and Retention Act of 2009," which directs the "Secretary of Labor to establish a partnership grant program to award matching grants to eligible entities to carry out comprehensive programs to provide education to nurses" (U.S. Congress, 2009). The main professional nursing association within the United States, the American Nurses Association, advocates for nurse graduate transition programs, but falls short of providing a model for organizations to follow. However, other countries, Canada and Australia, do have public nurse graduate programs that have been implemented, evaluated, and proven to be effective tools for professional nursing development and retention (Government, 2009; Victorian; 2003).

Creating a successful program is not easy. Organizations must facilitate program development and foster a culture that values the graduate nurse and the profession as a whole. Duchscher identifies four strategies that must be integrated into a successful program:

- Acknowledge and bridge the inherent value discrepancies between academia and discrepancies between academia and industry

- Provide ongoing support for and nurturing of the high professional practice standards brought to the acute care environment by the graduate nurse

- Provide consistent, structured, constructive, and goal-oriented feedback and supervised guidance of the graduate nurse

- Cultivate a sense of belonging for these new professionals through formal mentoring and preceptored clinical orientation (Duchscher, 2004).

The structure and function of transition programs can vary widely. When determining if a program is comprehensive, a person must ask:

- *how* the program is offered (does it contain a mix of content and application in a complimentary relationship over the entire transition program?);

- *what* content the program offers (does the program provide information on all aspects of transition such as dealing with conflict and managing your workload, as well as offer you opportunities to practice what you have learned alongside an experienced practitioner?);

- *who* teaches the program (are experienced nurses who practice currently participating, and does the program offer access to advanced educators, managers and professionals from across the disciplines?);

- *how long* the support extends over (is there a minimum of six months formal education and graduated introduction into the workplace?) (Romyn, 2009).

The Canadian and Australian programs' component guidelines are echoed in the general nursing literature. As such, this thesis will use the program format of these successful training programs as a benchmark for comparison of nine military and civilian facilities. Five large medical centers (three Navy and two civilian) and four mid-level hospitals (two Navy and two civilian) will be compared on offered specialty services and the key components of an effective program: orientation, training and support of preceptors, mentors, program manager, clinical support, manageable workloads and supernumery, and peer support (Duchscher, 2004).

1. Facilities

There are a number of different types of health care facilities. This thesis narrows that field to two types of hospitals: the major center and the mid-level hospital. The limitations were placed because those are the particular facilities that receive the majority of newly accessioned Nurse Corps officers. For the purpose of this thesis, the large medical centers are defined as those facilities that provide a large number of medical specialties and associated physician residency programs and mid-level hospitals as those that have a more limited selection of medical specialties and are likely to have only a Family Medicine residency program.

The large medical centers are used include the three large Navy Medical Treatment Facilities (MTF): National Naval Medical Center in Bethesda, Maryland, Naval Medical Center Portsmouth in Portsmouth, Virginia, Naval Medical Center San Diego in Balboa, California and two civilian facilities: University of San Francisco Medical Center in San Francisco, California and Pitt County Memorial Hospital in Greenville, North Carolina. The mid-level facilities are Naval Hospital Jacksonville in Jacksonville, Florida, Naval Hospital Bremerton in Bremerton, Washington, Alvarado Hospital in San Diego, California and Community Hospital of the Monterey Peninsula in Pacific Grove, California. The breakdown of the facilities is illustrated in Figure 8. They are divided by facility type and further segregated by military or civilian.

Each of the facilities offers an assortment of medical specialties and advanced technologies. The major medical centers will offer a larger selection than the mid-level hospitals. Appendix B. catalogs each of the hospitals and their respective specialty capabilities in a quick reference table. The larger facilities' services are not limited to those listed. They actually offer much more than those major areas. The selection was restricted to certain clinical areas to illustrate the key differences in capabilities between the facilities.
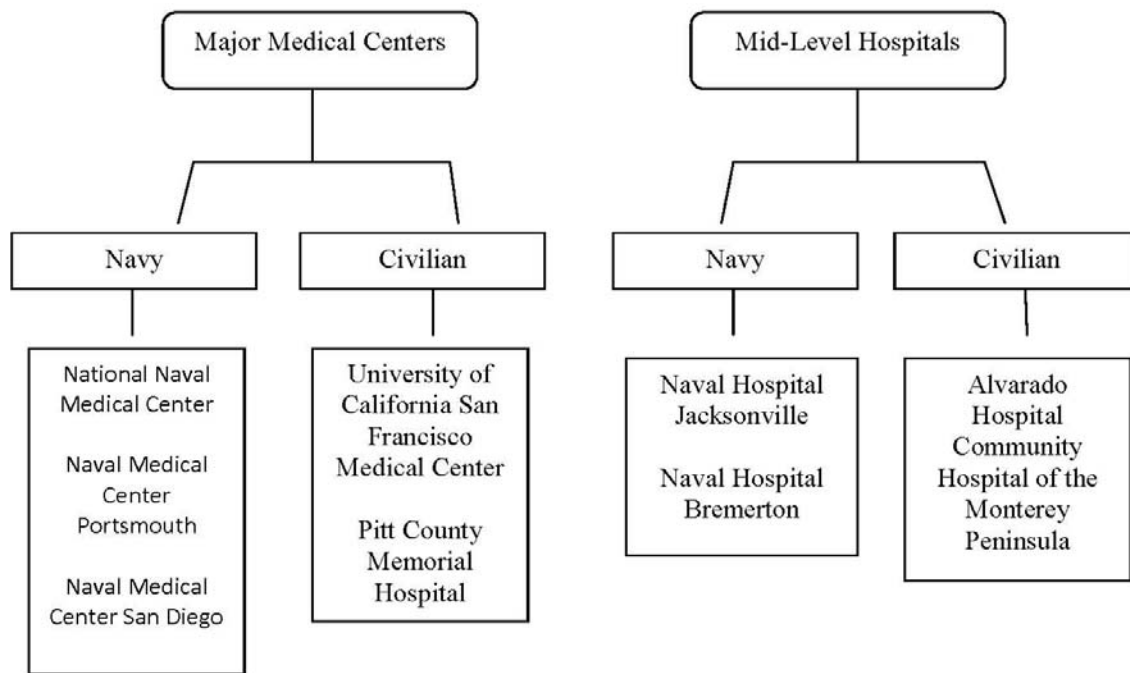
Figure 8.   Levels of Medical Centers Used in Study

2.   Program Components

a.   *Orientation*

Orientation is comprised of two distinct segments: organizational and clinical. Organizational orientation is important because it provides the standardized element common to all employees and establishes the basis for the graduate nurse's professional identity (Krugman, 2006). It is during this phase of orientation that the nurse is exposed to organizational structure, philosophy, mission, values and human resource management processes (Services, 2003).

Clinical orientations can be further divided into two parts: general nursing and unit specific. General nursing addresses the basic skills required by all professional nurses, such as veni-puncture, medication passes, and intravenous catheter insertion. It also provides additional clinical experiences on selected inpatient and specialty units.

These experiences generally last only a couple of weeks each and serve as a means to expose the graduate nurse to the interaction and interdependency of all aspects of the healthcare process (Duchscher, 2004).

While the length of the transition program as a whole should be somewhat individualized, this segment is more regimented and inflexible. This is due to the fact that a nurse is not privileged at a hospital and cannot practice nursing without being certified in the required professional skill sets. Until they are certified, they are not able to contribute or participate in the unit specific orientation phase. Some transition modes start the transition program after completion of the organizational and general nursing orientations, beginning the program with the start of the unit specific orientation (Duchscher, 2007). The organizational orientation and general nursing orientation should take a few weeks and no more (UCSF, 2009).

Unit specific orientations are more flexible and should be tailored to the particular nurse. Because each individual comes into the program with different backgrounds, educational experiences, and learning speeds and styles, organizations need to accommodate individual learning needs during transition (Services, 2003). Nursing is based in evidential research, so the unit specific orientations should encompass a curriculum that emphasizes evidence-based practice; not just procedures, but the understanding of why they need to be done. Krugman provides an example of evidence based patient outcomes in a post-Baccalaureate Residency Program:

Evidence-Based Patient Outcomes
- Patient Safety (managing the changing patient condition, fall prevention, safe medication administration, equipment safety and restraint prevention)
- Pain management (comprehensive assessment, pain scales, evidence-based interventions outcomes documentation)
- Skin and wound care (assessment tool, supplies/devices, evidence-based interventions, unit prevalence data)
- Patient/family teaching (learning assessments, teaching methods, age/culturally sensitive, knowledge verification)
- Responding to emergencies (mock code participation, internal/external roles, clinical emergencies) (Krugman, 2006).

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(1). Study Orientations. Each of the hospitals in the study has an orientation program, but their length and format are quite varied. Of the three orientation components, unit specific orientation exhibits the most variability among the programs; therefore the comparison-contrast will focus on that one area. However it is necessary to touch upon the other two segments: organizational and general nursing orientations.

The differences between the military and civilian manning models dictate the approach to organizational orientations. Military nurses' entry into the hospital setting is governed by outside forces such as Officer Development School graduation dates, when commissioning documents are completed, etc. Therefore, new nurses can arrive to MTFs as a group or as single individuals. Organizational orientations are scheduled on a set-time pattern, e.g., quarterly. Larger medical facilities have more new hires arriving resulting in more frequent orientations, e.g., monthly. General or unit specific orientations are quite often interrupted to attend organizational orientation. Civilian models hire new graduates as a group not as individuals allowing them to schedule an organizational orientation as an inclusive part of general nursing orientation.

Unit specific orientation is the main focus for the new graduate nurse; concentrating on direct patient care and the "job." While this is only a portion of being a professional nurse, it is the part that new nurses' best identify (Duchscher, 2008). Because it is the cornerstone of nursing practice, it must be thorough, comprehensive and allow the new graduate to learn through doing. The Nurse Corps adage, "see one, do one, and teach one," may not be the most effective teaching modality. Orientation approaches need to reflect both pedagogical and andragogical methodologies with close supervision and support. The benchmark orientation length is six months, during which time the nurse has a minimal patient-load that is increased as appropriate, supervision levels that are decreased as clinical independence is evident, and not counted as a full-time employee (FTE) (Services, 2003).

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In both the large medical centers and mid-level facilities, the civilian hospitals have a considerably longer unit specific orientation on average. In civilian facilities, unit specific orientations begin after completing the organizational orientation and range between 4–52 weeks, depending on the clinical area, and averaging 22.6 weeks. The military facilities range between 6–14 weeks, averaging 7.8 weeks. The average orientation length for large MTFs is 8.7 weeks versus 20 weeks for civilian hospitals. In mid-level MTFs, the average length is 6.7 weeks versus 20.7 weeks in civilian hospitals. Table 4 provides an overview of the lengths of each of the three portions of orientation. It is important to note when examining the table that the benchmark orientation is six months, not including the organizational or general nursing segments.

Some of the study hospitals offer a rotational introduction to a variety of workspaces, such as Intensive Care, Acute Care, and Maternal-Infant units. Due to staffing difficulties as a result of the Navy's deployment tempo, some of the Naval MTFs have eliminated or decreased the clinical rotations.

b. *Training and Support of Preceptors*

Preceptors are the backbone of a successful transition program. They have the most direct contact and influence on the new graduate nurse. Research indicates that orientations should have 1:1 baccalaureate-prepared clinical preceptors who have attended training based on the national residency curriculum coupled with specialty-unit training and continual training for reinforcement (Services, 2003). Hospitals want preceptors who are committed to the education and development of new nurses, so voluntary participation is essential. If possible, having designated preceptors in clinical areas maintain consistency in the orientation and increases and improves the success of the transition program (Prause, Clinton, Ball, Kloosterman, Biller, & Augustus, 2009).

Table 4.   Orientation Programs Overview

		Organizational Orientation	General Nursing Orientation	Unit Specific Orientation
Large Medical Centers	NNMC	1 day	2 wks	6 wks
	NMCP	1 day	2 wks	6 wks
	NMCSD	1 day during General Nursing orientation	3 wks	14 wks
	UCSF	1 day	Incorporated in Unit specific orientation	26 wks
	PITT	10 days over the first 8-12 wks	Incorporated in Organizational Orientation	8-26 wks
Mid-level Hospitals	NHJAX	1 day	4 wks	6-8 wks
	NHBREM	1 day	2 wks	6 wks
	ALVARADO	5 days in combination with General Nursing orientation	Incorporated with Organizational orientation	6 wks
	CHOMP	1 wk in combination with General Nursing orientation	Incorporated with Organizational orientation	4-52 wks

Evidence demonstrates that the new graduate and the preceptor have different perceptions about the preceptor/preceptee partnership. According to the National Council of State Boards of Nursing's Regulation and Education Committee, specific preceptor goals are "designed to: provide for a structures 'first work' experience, support mentoring relationships, provide clinical education experiences, and foster individual professional growth and commitment" (Chisari et al., 2006). Research has identified four guidelines for the preceptor relationship that augment the e transition program: clearly stated expectations for competent performance, constructive feedback about performance, adequate resources and support systems, and a safe and trusting environment (Santucci, 2004).

The Vermont Nurse Intern Program (VNIP) is a not-for-profit organization that's mission is "to create a formal and sustainable nurse internship program that provides the clinical experience necessary to support the novice's entry into practice, their growth along the continuum of expertise, and their professional practice within the complex and demanding field of healthcare" (Program, 2010). A focus of this organization is to create a preceptor model that is standardized in development and support and is applicable to the majority of direct care providers (Program, 2010). As such, it suggests the design of preceptor/internship programs include the following:

1. Clearly identified roles and responsibilities that also delineate where to find the "time for precepting."

2. A clinical coaching plan that outlines specific goals, activities and measurable outcomes.

3. This plan must follow principles of teaching/learning to foster the progression of the novice through all core discussion and/or problem solving.

4. Valuable and reliable tools for competency verification that identify specific, measurable criteria for assessment (Chisari et al., 2006).

It is the responsibility of the organization to equip preceptor with the necessary tools to fulfill their role. While programs can differ in organization, it is essential that some type of formal training and ongoing support be available to preceptors (Services, 2003).

It is important to note that the preceptor is not the same as the clinical nurse specialist or the program manager. Those are support sources for the preceptor, offering training and clinical expertise that assist the transition process. According to the benchmark model, preceptor involvement begins prior to starting in the unit specific orientation and continues throughout the first year of practice and is contingent on the graduate having continued access to the preceptor. Essential attributes of a preceptor have been identified as:

- competent practitioner willing to act as a preceptor

- effective interpersonal and communication skills

- supportive attitude to the graduate nurses and the new graduate transition program

- ability to share and convey knowledge

- skilled in teaching and nurtures learning

- approachable

- offers constructive and realistic feedback

- ability to identify and create learning opportunities for the graduate to assume new responsibilities confidently (Services, 2003).

(1). Study Training and Support of Preceptors. Like the inclusion of orientation, all the hospitals in the study have a preceptor model transition program. All utilize preceptors, but the difference lies in the training methods, continual support, and the average number of years of clinical practice had by preceptors.

There are two types of training methods used in the study hospitals: traditional classroom and interactive compact disc. While some required preceptor training, other facilities had it available but did not require it. In the large military medical centers, there was a mixed response to preceptor training. None of the three offered the same training opportunities; one citing that the only interactive compact disk training was available to nurses working on the Intensive Care Unit because the training was purchased out of the unit's budget. There was no process in place to preceptor training, so long term program support for these essential members of the transition team was lacking.

As for the large civilian hospitals, preceptor training was mandatory and extensive. They focus on preceptor preparation, continual training and follow-up for training relevance and efficacy. UCSF has preceptors, who have a minimum of 2 years clinical experience, attend the Preceptor Development Program, with mandatory participation in classes occurring throughout the year. There is a task force in place that continually reevaluates the Development program based on feedback obtained from the preceptors and the new nurses (Mulligan, 2010). Pitt County Hospital has a preceptor training model they call the "Clinical Coach Model." It involves extensive

training in teaching learning principles, working with adult learners, using a clinical coach plan and their competency based orientation plan. Their preceptor training program is tri-fold; looking a critical thinking skills, interpersonal skills and technical skills (Marshburn, 2007).

The mid-level military facilities have classroom preceptor training only, but it is mandatory. The civilian hospitals are divided. Both have classroom training, but only CHOMP requires it. None of the hospitals have any long-term training opportunities or follow-up with preceptors.

The second aspect of preceptor training and support is the amount of experience for the preceptors. Research indicates that nurses are not clinically sound until after several years of clinical experience (Duchscher, 2006). It also indicates that new graduate nurses require guidance from clinical experts (Dracup, 2004). Therefore, it is essential that preceptors have enough clinical expertise to provide a well-rounded, evidence-based orientation. Nurses with fewer years of experience have fewer critical thinking skills, nursing judgment and professional acumen than those with more experience.

There is a significant difference in preceptor experience between the military and civilian hospitals used in the study. All MTFs used both military and civilian preceptors, but all facilities indicated that the majority of their preceptors were military staff members. None of the facilities reported an average number of years experience of military preceptors to be higher than 1 year. The civilian preceptors at MTFs have an average experience length of 2 years for the large MTFs and 12.5 years for Naval Hospital Bremerton, while Naval Hospital Jacksonville was unable to report an average. Just like the military facilities, large civilian medical centers claim a lower average experience level than mid-level civilian hospitals. The large facilities average 3.75 years of experience, while the mid-level facilities average approximately 6 years experience.

Table 5 exhibits all aspects of preceptor training and support at each of the commands. Only the large civilian medical centers and none of the military

facilities meet the preceptor training and support benchmark standard of formalized initial training with an on-going training program and staffed by experienced professional nurses.

Table 5.   Training and Support for Preceptors

		Classroom Training	Interactive Computerized Training	On-Going Training	Average Experience
Large Medical Centers	NNMC	Available; not required Booklet available	Yes – only in ICU	No	Civ: < 2yr Mil: < 1yr
	NMCP	Yes	No	No	Civ: 2 yr Mil: 6 mo
	NMCSD	No	Yes	No	Civ: 2 yr Mil: < 1yr
	UCSF	Yes	Yes	Yes	2-5 yr
	PITT	Yes	No	Yes	3-5 yr
Mid-level Hospitals	NHJAX	Yes	No	No	Unk
	NHBREM	Yes	No	No	Civ: 10-15 yr Mil: < 1 yr
	ALVARADO	Preferred, but not required	No	No	5-6 yr
	CHOMP	Yes	No	No	5-7 yr

c.   Mentors

Clinical mentors are an integral part of the transition process. They provide guidance and assistance to the novice nurse. According to Diana Halfer, MSN, RN, mentors provide "a listening ear, an objective voice, and valuable insights for balancing work/life priorities" (Halfer, 2007). They are there to assist graduates deal with the demands of the work environments and aid the new graduate nurse with professional development. Formal mentoring programs should be established and supported by the organization (Services, 2003).

One essential requirement of the mentor is that the nurse not be in the direct chain of command as the new graduate. In other words, the mentor and the new graduate should not work on the same clinical unit. The relationship is mutually supportive, cooperative, and collaborative and mentors describe their practice enhanced in both diligence and precision (Duchscher, 2004).

The benchmark transition program dictates that a formal mentor program be established with experienced nurses employed outside the clinical area of the new graduate.

(1) Study Mentors. The hospitals in the study were almost exactly divided on the issue of mentors. All the military facilities, large and mid-level, have formal mentor programs. It is a key element of the Nurse Corps professional development (Weatherwax, 2010). By contrast, only one of the civilian facilities, UCSF Medical Center, has a formal mentorship program. The other civilian facilities indicated that the responsibility of establishing a mentoring relationship with a more senior nurse belonged to the novice nurse. Table 6 provides an overview of which facility has a formal, organizationally supported mentor program.

Table 6.   Formal Mentor Program

	NNMC	NMCP	NMCSD	UCSF	PITT	NHJAX	NHBREM	ALVARADO	CHOMP
YES	X	X	X		X	X	X		
NO				X				X	X

d.   *Program Manager*

While there are many different models for transition programs, the existence of a dedicated program manager is consistent among them. The benchmark program recommends "that an organization provide a dedicated program coordinator to oversee program planning, structure, content and evaluation" and that the coordinator provide "the link between students, support personnel, the organization's administration and collaborating agencies" (Services, 2003). It is widely accepted that the role of program manager is a full-time job and may benefit from having an advisory board with

"representation from constituent groups such as nurse leaders, recruitment, staff development, and clinical nurses…to provide support and guidance for initial start up and continued development" (Krugman, 2006).

(1) Study Program Manager. All of the hospitals in the study have a dedicated individual who manages their respective new graduate transition program. The only difference between the military and civilian facilities is the continuity of the position. Within the civilian facilities, the program is managed by a permanent staff member. Their average length of time in the position was four years. Whereas, with the military facilities, the programs were run by Naval Nurse Corps Officers who are subject to the customary 18 month–2 year rotations. This means that at least every two years the program is lead by a new nurse, possibly without any experience or training in how to develop and run a new graduate nurse transition program.

e. Clinical Support

Clinical support is a vague term that has many different interpretations. It can describe the preceptor, the nurse manager, or the new graduate transition program manager. However, for this thesis, clinical support will refer to the role of the Clinical Nurse Specialist (CNS) and additional clinical and professional training that occurs outside of the unit specific orientation.

Clinical Nurse Specialists are masters prepared nurses who are subject matter experts in their respective clinical area. Their role is primarily to serve as a resource for nursing units and to develop evidence-based research unit specific training programs designed to enhance clinical skills and knowledge and are an invaluable tool for the new graduate and the preceptor. Creating a transition program with specialty knowledge as well as core or general knowledge produces more significant results (Chisari et al., 2006). Unfortunately, there has been an erosion of the clinical educator role that has a serious affect on the transition of new graduates as well as ongoing skill development (Romyn, 2009).

While the preceptor is responsible for the day-to-day training and education of the new graduate, the time available for in-depth education may be limited.

Maintaining a full patient workload and precepting a new graduate, leaves little time for continuing education opportunities between the preceptor and preceptee. The CNS is available for specialized education, to conduct in-services on clinical topics and to assist the preceptor with learning process. The CNS is a respected clinical expert who facilitates and fosters critical thinking skills by providing feedback, encouraging self-assessment, and supporting individual professional development (Krugman, 2006). Research indicates that the CNS provides the graduate nurse with the link between knowledge and understanding. According to Duchscher, graduate nurses viewed the information provided by the CNS as synergistic with the skills learned with the preceptor. There was "meaning attached to knowing and understanding rather than just doing" (Duchscher, 2001).

The second part of clinical support is the on-going education opportunities outside the unit-specific orientation. This is both clinical and non-clinical education. An important part of becoming an expert nurse is professional development. Patient advocacy is a core element of nursing practice. To be an effective patient advocate a nurse must be able to challenge treatment plans and modalities, medication choices and interject psycho-social elements into a medical plan-of-care. This takes not only experience, but professional maturity.

During the first year of clinical practice, new graduate nurses are intimidated by physicians (Duchscher, 2001), experience feelings of inadequacy and are ill-prepared for the role of patient advocate both clinically and professionally (Kramer, 1974). On-going education classes provide that link between what is being learned on the unit and what is needed to perform as a professional nurse. The benchmark new graduate transition program identifies clinical support is necessary to create a rounded professional development by introducing the new graduate nurse to a range of "management skills, professional competencies, the concept of cultural safety, and the ethical dimensions of practice" (Services, 2003).

(1)   Study Clinical Support. Each of the hospitals in the study had the CNS identified as a key component of the new graduate transition program, but utilization of the CNS in the targeted role was not consistent across the study. Civilian

hospitals, both large medical centers and mid-level hospitals, employ the CNS as a clinical specialty expert and support the identity of educator, facilitator and professional developer. The CNS is the key clinical expert on the inpatient unit at Naval MTFs; however, the CNS often has a dual role. Due to the nursing shortages, the CNS is often also the Division Officer or Department Head. LCDR Faith at Naval Hospital Bremerton emphasizes the absence of the CNS at the bedside by saying if the CNS is here, the nurse graduate goes with her for a week, but that is not often enough (Faith, 2010).

The Civilian Hospitals across the entire study make use of the CNS not just as the bedside expert, but also as the new graduate transition program managers; further exploiting their unique in-depth knowledge base. In addition, the CNS is employed in the various continuing education opportunities at many of the hospitals. For example, at Alvarado Hospital, the transition program offers five different continuing clinical education modules which are lead by subject matter expert clinical nurse specialists (Clukay, 2010). Pitt County Memorial Hospital has a similar education system. They have a program called the "Cornerstone Program" where ten topics get discussed, many of which are lead by CNSs.

The continuing education portion of clinical support offers the new graduate exposure to clinical topics that may or may not be covered in their respective work units. They are usually generic topics, such as pharmacology, circulatory problems, or heart issues. All of the civilian facilities offer these programs, while only one of the Navy MTFs has a similar program (Pegg, 2010) Pitt County Memorial Hospital takes the practice in a different direction. They start their new graduate transition program with an assessment of the new nurse, based on Dorothy del Bueno's Performance Management Incorporation. The assessment involves the use of vignettes based on patient problems, such as patient symptoms, vital signs or lab values. After implementing the program in 2001 and completing liability and validity testing of the CNS raters, Pitt uses this tool to individualize new graduate orientation plans (Marshburn, 2007). Validity testing of raters is very important to increase the efficacy of the evaluation. One study illustrated that expectations and criteria to assess practice readiness of new nurses are different

among nurses with five or more years' experience and those with fewer than five years' experience. The more experienced nurses tended to judge the new graduates more harshly (Romyn, 2009).

f.   Manageable Workloads and Supernumery

Not expecting new graduates to perform at the same level as an experienced nurse is central to the new graduate transition program. As such, it is unrealistic to give a full patient load to a new nurse. Since the benchmark program insists on at least a six month unit specific orientation, it is reasonable to apply a progressively increasing patient census count plan for the new nurse. In other words, as the new graduate increases clinical knowledge and skills and the preceptor decreases direct supervision, the patient load increases proportionally. The workload complexity should match the capability of the new graduate and should reflect an appropriate amount of incrementally staged learning opportunities (Services, 2003).

According to the research, the new graduate should not be counted as a full-time employee while in training. This is to eliminate any risk of imposing a clinical burden on the new graduate. The new graduate has a limited capability for multitasking and the challenges involved with higher-level decision making necessary in the nursing profession. Expecting the new graduate to be able to perform at that level is unfair and dangerous. There is an argument that the new nurse should wait until six months of clinical practice before being gradually permitted to start caring for more unstable patients and only assuming more experienced staff is readily available (Duchscher, 2008). Patient morbidity and mortality rates increase with the less nursing experience (Simoens & Villeneuve, 2005). According to Duchscher, "allowances need to be made for a reduced workload and the new graduate should be given dependable access to a consisted seasoned clinical colleague who is also afforded work relief" (Duchscher, 2007). Staffing ratios and workload management need to reflect the extra burden imposed on the seasoned professional as well as the lack of contribution from the new graduate. The new nurse should not be counted as a full-time employee (FTE) until at least the completion of the unit specific orientation or at which time the new graduate

transition program manager, nurse manager, and CNS determine the new graduate can manage a standard patient load for their specific work area.

(1) Study Manageable Workloads and Supernumery. Universally throughout the study hospitals, manageable workloads were not a central part of their new graduate transition programs. It was assumed that at the end of the unit specific orientation, that the new graduate would maintain a full patient workload. It is important to point out that each hospital has its own orientation time period, so the differences among the large medical centers and the mid-level facilities and the differences between the military and the civilian facilities can be based on orientation length. It is also worth noting that few of the facilities in the study maintained an orientation length representative of the benchmark program.

The military facilities have no more than a fourteen week orientation, at which point the new graduate is considered a full-time employee and carrying a full patient load (Pegg, 2010). At which time, there is little-to-no on-going training and support available to them due to the decreased number of skilled staff and the subsequent higher staff/patient ratios. Civilian hospitals have the same policy of considering the new graduate as a FTE at the end of the unit specific orientations, but their average orientation length is three times longer than the military facilities.

g. Peer Support

Peer support is an essential part of the benchmark program. It offers the chance for new nurses to not only socialize and develop relationships on a personal level, it provides an opportunity for the new nurses to allow new graduates to problem solve and share experiences, challenges and successes (Krugman, 2006). Peer support does not have to be limited to more informal settings; it can be included in the non-clinical portion of the continuous training. This gives the new nurses the opportunity to be supported by clinical and educational staff while exploring theoretical and professional concepts; building their joint identity as nurses. The benchmark program recommends using the peer support time for a variety of activities including: seminars, group discussions, observations, reflective practice techniques, journaling, research and investigation, peer support, and personal supervision or mentoring (Services, 2003). Krugman's study

identified one nurse transition program that had four-hour seminars that began with a round-table segment called "Tales from the Bedside," which gave new graduates the opportunity to share their stories, offer support, and "share suggestions for improved practice in a safe environment among peers" (Krugman, 2006).

(1)   Study Peer Support.   Peer support groups were not prevalent among the most of study hospitals. None of the Navy MTFs had any formal peer support group available to new graduates. However, several noted a Navy Nurse's Association in place at their facilities that functions as an informal peer support group (Davis, 2010).

Most of the civilian facilities had a much more pervasive approach to peer support. It is incorporated into the every part of the new graduate nurse transition program. At the large medical centers, the peer groups start at the beginning of the orientation and continue through the entire process. At Pitt County Memorial Hospital, they hire between 120–150 new graduates a year and each start their peer groups with interpersonal skills and team building skills, with a concentration on working through conflicts and resolving issues (Marshburn, 2007). It is part of their "Go for the Gold Program," which consists of five sessions that deal with conflict management, juggling roles, the whole concept of reality shock, and transitioning from being a student to being a professional (Marshburn, 2007). Dianne Marshburn stated that they will often discover difficulties with preceptors or other issues and be able to intervene before the problem can escalate (Marshburn, 2007). At UCSF, their peer groups begin with the didactic portion of the general nursing orientation and continue with weekly meetings on Fridays for the subsequent next six month.

The civilian mid-level facilities have mixed results in the peer support category. CHOMP has a small support group that begins with the hospital orientation and continues for the duration of the transition program. Meetings, consisting of a two-hour education/training class and a few hours of socialization, are held once a month. Terril Lowe, VP of Nursing, stated that this is the time the new nurses voice their questions and concerns to each other and to the facilitators.

h.   Other Differences

After discussing the key components of a successful new graduate transition program, there are still aspects to the study programs that are unique to each and worthy of notation. Because there is not a professional standard set in the United States and because the practice of nursing is constantly evolving, it would be remiss to not evaluate each piece of the programs for potential implementation. Both the military and civilian facilities have creative and innovative approaches to education and training. While some may be difficult to transfer to a military setting, modifications could be made.

The format of UCSF's transition program is different from all the other programs in the study. The traditional format includes didactic training and then a short rotational period through various inpatient units. UCSF has taken those rotations and lengthened them from 1–2 weeks and made them 3–4 weeks on 4–6 different units. The nurses are then used as "coverage" in a single work space for a month at a time, allowing them to build strong professional relationships, while still maintaining their peer connection with their weekly meetings. Lou Mulligan, Director of the training program, stated that it was very well received and has received such positive feedback from the new graduates, preceptors, and clinical managers that they are going to expand the program to add more new graduates. UCSF's loss rate prior to implementing this program was an impressive 10 percent, but still cost the organization approximately $75,000 per nurse. Ms. Mulligan reported the cost of the new program to be more expensive due to its length, but worth the investment. The new nurses are better prepared, happier and are more "solid" practitioners. Retention with the inaugural cohort is 100 percent (Mulligan, 2010).

In 2009, the Chief of the Bureau of Medicine and Surgery, authorized the use of Clinical Modeling and Simulation (M&S) in training of medical personnel to enhance Navy Medicine's capabilities (Chief, 2009). Naval Medical Center San Diego and Naval Hospital Jacksonville have implemented this instruction and are using simulation to close the "gaps" between school and what is offered at the MTF.

According to CDR Kerri Pegg, the Simulation Center recently had a trauma group training session that involved a team setting comprised of Operating Room staff, Medical Officers, Registered Nursing and Corpsman (Pegg, 2010). The intention is to continue to utilize this valuable training tool to expose medical staff to clinical situations not available in their respective facilities.

V.   QUANTITATIVE ANALYSIS

A.   INTRODUCTION

The quantitative analysis in this thesis involves a statistical examination of the impact of first duty station assignment on retention of Nurse Corps officers. It analyzes data on officers who are assigned to one of the three major medical treatment facilities (MTF) within Navy medicine. Those MTFs are the National Navy Medical Center (NNMC) in Bethesda, Maryland, Naval Medical Center Portsmouth (NMCP) in Portsmouth, Virginia, and Naval Medical Center San Diego (NMCSD) in Balboa, California. Throughout the remaining portion of the thesis, these facilities will be known as the "Big 3," as they are colloquially known in Navy medicine.

After newly accessed Nurse Corps Officers finish Officer Development School, they report to their first duty assignment. Any MTF or clinic within Navy medicine can receive new Nurse Corps graduates. Not all of the facilities are equal in capabilities, services or size. The Big 3 are the largest in the medical system. They encompass physician training for a number of specialties, adult and pediatric intensive care units, extensive medicine and surgical capabilities and the highest acuity patients. These are known as tertiary care facilities. By definition, a tertiary care hospital is a facility that offers specialty consultative care for special investigation and treatment (Tertiary Care Definition, 2010).

The next level of MTF is the mid-level Naval Hospital. For the purpose of this thesis, these hospitals are identified by the existence of Family Medicine Residency Programs. Unlike the Big 3, they do not offer access to a variety of specialties, but can treat adult intensive care patients and offer basic specialty care, such as Obstetrics and Gynecology and Orthopedics. Often the Naval Hospitals maintain training agreements with neighboring civilian and other military tertiary facilities that enable its staff to obtain additional training not available at their hospital. The smallest MTF is the medical clinic. These are primary care facilities that do not offer inpatient care of any type.

While it is conceivable that newly accessed officers could be sent to any treatment facility, the analysis in this chapter separates Nurse Corps officers into two categories: those assigned to one of the Big 3 and those assigned to another MTF. No distinction between a mid-level hospital and clinic is made because the number of officers assigned to a clinic is so low as to render it statistically insignificant.

B. METHODOLOGY

1. Dataset

The Defense Manpower Data Center (DMDC) is a clearinghouse of military personnel data that serves as the "most comprehensive central repository of personnel (currently 35 million people), manpower, casualty, pay, entitlement, procurement, survey, testing, training and financial data in the Department of Defense (DoD) (Center, 2009-2010). With DMDC data Nurse Corps officers can be followed longitudinally through their careers from commissioning, through each duty assignment, training courses, and finally to release from active duty. This enables researchers to identify individual members from specific entry cohorts and follow them through their careers on active duty.

For this thesis, data is used on successive annual cohort groups of Nurse Corps officers who started active duty service between 1994 and 1998. The new entrants are tracked through their first 6 years of active duty service. The data identifies those who remained on active duty at that point and those who are separated from active duty. The different commissioning programs have active duty service obligation lengths that vary from three to five years based on commissioning source and bonus received. The majority of new accessions have a service obligation between four and five years. Because routine duty assignments are three years in length and service obligations are longer, it is necessary to extend the longitudinal tracking beyond the first duty station. This is why the cohorts are followed until the six-year mark. The data set also contains officers who were prior enlisted and inter-service transfers. In this thesis, we define all cohorts members as officers who are just beginning their active duty service. This

distinction can comfortably be made because prior enlisted have no experience as an officer and the number of inter-service transfers is negligible.

The original DMDC data contained all Nurse Corps Officers on active duty from 1994–2006. This included officers who were at every phase of their careers. Therefore, it was necessary to restrict the sample to only those who entered active duty service during 1994-1998 because members of these entry groups could be followed over the necessary six consecutive years. Each cohort is identified as a separate year group, i.e., 'yrgrp94' represents Nurse Corps officers who started active duty service in 1994, and so on.

2.   Variables

The study estimates regression models with a binary dependent variable of retained ('Retained'). The multivariate models are specified as linear probability models are estimated via OLS methods. The explanatory variables include basic demographic background variables and year dummies to address any factors that vary over time that would lead to a higher level of retention or not.

Because of the way the data set was arranged, it was necessary to identify the individuals who were both from the desired year group and assigned to one of the Big 3 for their first duty station. The first step was to attach a Unit Identifier Code (UIC) to each individual. This was accomplished by identifying the accompanying UIC for each of the Big 3, giving it a value of 1 while all other UIC were given a value of 0. Five new interaction variables were created by interacting year group with the Big 3 UIC identifier, 'Top394' through 'Top398'. For example, the interaction variable "Top394" is created by interacting "Yrgrp94" x "Big3". The same was done for those who officers retained at their respective six-year active service mark between 2000 and 2004. The five new variables were named "Retained94" – "Retained98". The single dependent variable of "retained" was derived by summing all the "Retained94" – "Retained98" variables.

The set of explanatory variables include standard demographic variables such as gender, marital status, dependents, and race/ethnicity. Race/ethnicity is identified via five separate binary variables for white, African-American, Hispanic, Asian/Pacific Islander, and other. The year group dummy variables were included to explain any

characteristics unique to that year that might influence retention, such as the economy or "stop-loss" measures. Each of the variables is binary with values of 0 or 1. Table 7 catalogs and summarizes all the variables used in the model for this study.

Table 7.   Summary of Variables

Variable	Observations	Minimum	Maximum
Retained	1510	0	1
Gender (female)	1510	0	1
Married	1509	0	1
r_child (has children)	1509	0	1
White (Caucasian)	1510	0	1
AA (African American)	1510	0	1
Hisp (Hispanic)	1510	0	1
API (Asian Pacific Islander)	1510	0	1
Other	1510	0	1
Top3yr94*	1510	0	1
Top3yr95*	1510	0	1
Top3yr96*	1510	0	1
Top3yr97*	1510	0	1
Top3yr98*	1510	0	1
Yrgrp94	1510	0	1
Yrgrp95	1510	0	1
Yrgrp96	1510	0	1
Yrgrp97	1510	0	1
Yrgrp98	1510	0	1

* Denotes the Nurse Corps Officers in each year group assigned to one of the Big 3 facilities for their initial duty station.

3.   Descriptive Statistics

Of the 1,510 officers in the study, 46.2 percent (698 individuals) were assigned to one of the Big 3 facilities and 53.8 percent were assigned to the remaining mid-level hospitals and smaller MTFs.   Tables 8–12 provide the demographic differences in the study population.   As these tables show, approximately 63 percent of the sample is female and 34 percent male. Sixty-three percent are married and nearly half, 51 percent, have at least one child.   The sample is predominately Caucasian (77.5 percent) and African-American is the largest minority group with nine percent of the sample.   Each cohort group averaged 302 officers.   This number is skewed because of the uncharacteristically high number, 410, of new accessions in 1995.

Table 8.   Gender Statistics

	Female	Male	Total
Number of Observations	960	550	1510
Percentage	63.36%	36.64%	100%

Table 9.   Marriage Statistics

	Married	Not Married	Total
Number of Observations	958	551	1509
Percentage	63.49%	36.51%	100%

Table 10.   Children Statistics

	With Children	Without Children	Total
Number of Observations	777	733	1510
Percentage	51.4%	49.6%	100%

Table 11.   Ethnicity Statistics

	Caucasian	African-American	Hispanic	Asian Pacific Islander	Other	Total
Number of Observations	1170	136	75	91	38	1510
Percentage	77.5%	9%	5%	6%	2.5%	100%

Table 12.   Cohort Population

	1994	1995	1996	1997	1998	Total
Number of Observations	299	410	294	287	220	1510

Several studies have identified various predictors of Nurse Corps officer retention (Paradis, 1998; Turner, 1990). Although accession source has been found to be a significant predictor in prior studies, it was not included in this analysis because the focus of the study was not on the commissioning program, but rather on different experiences after accession that might influence retention. For a more complete analysis, commissioning source should be included in the model, but information on commissioning program was not included in the available data set.

4.   Theoretical Model

The linear probability regression (LPM) model analyzes the independent effect of each explanatory variable on the dependent variable, in this case, the probability of retention. Estimation of the LPM generates the effect of each independent variable on the retention probability and whether the effect is statistically significant. Often, even though the independent variable may have a statistically significant effect on the retention probability, its effect can have a small size. Thus, both statistically significance and "practical" significance are important in evaluating the effect of a given independent variable on retention.

The linear probability model for retention is specified as:

Retain = B0 + B1(gender) + B2(married) + B3(children) + B4(race) + B5(Top 3 placement for each year group) + B6(Yr dummies for each year)

The hypothesis of the thesis is that assignment to one of the Big 3 facilities will lead to higher retention. The literature supports that nursing is a field where retention is influenced by the newly graduated nurse's follow-on education. The Big 3 facilities offer greater educational opportunities because they have a larger number of specialties, higher acuity patients and larger patient numbers than the smaller MTFs.

If nurses feel confident in their clinical skills, part of the health care team, and understand and buy into the organizational mission, retention rates will tend to be higher. Additional hypotheses can be made based on the available nursing economic literature (Hirsch, 2008). In the civilian sector, entrance and exit is relatively easy and can support a worker who leaves the profession to raise children and to return to the profession at a later date. Since women are the primary caregivers and also the majority of nurses, it stands to reason that retention rates will tend to be lower for women than for men.

There are inherent limitations within the model. Unquantifiable variables, such as propensity to serve, importance of family, and desire to settle down and not move frequently, will undoubtedly influence the results. They were not addressed in this regression for two reasons: (1) no adequate variables were available in the data set provided, and (2) the desired information focused on the factors that influenced staying in the military, such as a personal identification with the military, rather than those that predisposed leaving such as the desire to remain in one clinical area. The study assumes that individuals leave the military voluntarily. There are administrative reasons for release from active duty, such as disciplinary actions and physical readiness test failures, but the number of involuntary releases is low. Involuntary releases were deleted from the data set.

C.   RESULTS

1.   Descriptive Statistics

The overall percentage of nurses who leave the Navy after completing their initial service obligation in this data set was 41.2 percent, leaving a 58.8 percentage retention rate. However, cohort loss rates vary from a low of 30 percent to a high of 61 percent. Table 13 breaks down each cohort's loss rate by subtracting the number of officers who leave the cohort from the total of those who started in the cohort then dividing the remaining number of officers by the beginning number of officers. Table 14 shows the loss rates of officers assigned to one of the Big 3 for their initial duty station, by cohort year. The percentage of nurses who were assigned to one of the Big 3 facilities for their initial duty station and who left the Navy averaged 43.4 percent, leaving a 56.6 percentage average retention rate. The percentages are derived by using the same method as used to derive the cohort groups' retention rates.

Table 13.   Year Group Cohort Loss Rates

	1994	1995	1996	1997	1998	Total
Started	299	410	294	287	220	1510
Retained	118	251	206	197	121	893
Released from Active Duty	181	159	88	90	99	617
Percentage who left active duty	61%	39%	30%	31%	45%	Average loss rate 41.2%

Table 14.   Big 3 Year Group Cohort Loss Rates

	1994	1995	1996	1997	1998	Total
Started	138	190	150	126	94	698
Retained	59	110	105	83	48	398
Released from Active Duty	77	80	54	43	46	300
Percentage who left active duty	56%	42%	36%	34%	49%	Average loss rate 43.4%

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2. Linear Probability Model Results

The hypothesis that being stationed at one of the large Navy medical centers for the first duty station positively affects retention of Nurse Corps officers is not supported by the linear probability model's results. The estimated coefficient of being stationed at one of the Big 3 for the first duty station is -0.00519. This means that for officers who are stationed at one of the Big 3 for their initial duty station retention is 0.52 percent points lower than for officers who are stationed at smaller commands. However, that negative effect is not statistically significant. Table 15 identifies the estimated coefficients for each explanatory variable and the statistical significance of each coefficient as estimated via the LPM. For example, for the explanatory variable "r_child," which indicates the officer has at least one child, the estimated coefficient indicates that retention is 15.5 percentage points lower for officers with children than for those without. Retention is eight percentage points higher for officers who are married than for those who are single. The explanatory variable "yrgrp98" has a coefficient of 0 because it is the base year group variable on which the other year group variables are compared. While none of the LPM results for the Big 3/cohort group interaction variables are statistically significant, they do indicate that being stationed at one of the Big 3 for the first duty station for cohort groups 1995–1998 negatively effects Nurse Corps officer retention. However, being stationed at one of the large MTFs for cohort group for 1994 had a positive effect on retention with a coefficient of 0.123. Therefore, assignment to one of the Big 3 overall has no statistically significant effect on retention of Nurse Corps officers who entered the Navy from 1994–1998. A Bruesch-Pagan test was performed to check for heteroskedaticity. As predicted, because the data represent the entire population not just a sample, no heteroskedaticity was noted. The LPM model provided an R-squared value of 0.116, meaning that 11.6 percent of the dependent variable (Retained) is explained by the variables in the model.

Table 15.   Linear Probability Model Results

	(1).
VARIABLES	Retained
Top3	-0.00519
	(0.0555).
gender	-0.101***
	(0.0266).
married	0.0813***
	(0.0266).
r_child	-0.155***
	(0.0263).
white	-0.117
	(0.0763).
AA	-0.0953
	(0.0850)
Hisp	-0.120
	(0.0932).
API	-0.0886
	(0.0894).
other	0
	(0)
Top3yr95	-0.0251
	(0.0722).
Top3yr96	-0.00218
	(0.0777).
Top3yr97	0
	(0)
Top3yr98	-0.0532
	(0.0843).
Top3yr94	0.123
	(0.0774).
yrgrp94	-0.224***
	(0.0555).
yrgrp95	0.0707
	(0.0521).
yrgrp96	0.142**
	(0.0570)
yrgrp97	0.123**
	(0.0556).
yrgrp98	0
	(0)
Constant	0.767***
	(0.0851).
Observations	1509
R-squared	0.116
Standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

The retention probability for officers in the 1994 cohort officers was 22.4 percentage points lower than those from the base year of 1998 who were assigned to smaller facilities. This result is statistically significant with a p-value of the coefficient is 0.01. For ease of comparison, Table 16 isolates the regression results specific to the Big 3 assigned officers in a single table.

Table 16.   Big 3 Yearly Cohort Linear Probability Model Coefficients

	1994	1995	1996	1997	1997
Coefficient	0.118**	-0.0303	-0.00738	-0.00519	-0.0584
Standard Error	(0.0544).	(0.0464).	(0.0543).	(0.0555).	(0.0635).

*** Denotes p<0.01

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VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. SUMMARY

Nursing retention is not just a Navy problem. It is a systemic problem throughout the profession.   The nursing industry experiences an annual loss rate of approximately 20 percent. The Navy's six-year loss rate of 41 percent, (2000–2004), and five-year loss rate of 32 percent (2008), is far above its civilian counterparts.   Identifying strategies to prevent the hemorrhaging of Nurse Corps Officers is essential. A literature review states that proper training of nursing staff leads to increased job satisfaction, which in turn positively influences retention. Because larger Navy medical centers offer more training opportunities than smaller hospitals, the new graduates assigned there for their first duty station assignment will be better clinically prepared and, therefore, would be expected to retain at a higher rate than those assigned to smaller facilities.

Nursing research indicates that new graduate nurses, the primary source of new officers in the Nurse Corps, do not possess the clinical abilities, critical thinking skills, and professional acumen to perform at the level of an experienced nurse. New graduate transition programs assist the new graduates in their progression from novice to expert nurse during the critical first year of practice. These programs not only increase the skills and abilities of the new nurse, but also have positive impact on retention and patient care.

Nurse accessions come to the Navy from a variety of sources. Recruiting efforts focus primarily on new graduates either through enlisted commissioning sources, officer training programs, or direct accessions. While a new emphasis is being placed on recruiting particular mission critical specialties, those numbers comprise a small portion of the total recruiting goal. For fiscal year 2010, the Nurse Corps has exceeded its recruiting goal and has a waiting list that extends into fiscal year 2011. This is a positive first step to decreasing the current gap in the Nurse Corps' Lieutenant rank, created by not meeting recruiting goals between 2003–2005.

There are far-reaching impacts to the increased recruiting goals and its attainment. Billet availability is based on hospital requirements and Officer Programmed Authorizations (OPA) guidelines. Increases in the number of Ensigns beyond the stated OPA, has resulted in the over staffing of Ensigns at MTFs. They are placed in Lieutenant Junior Grade and Lieutenant billets, resulting in a perceived level of skill and experience that does not exist. This creates discord between the Nurse Corps apparent capabilities and what it is able to provide.

Nursing research indicates that a comprehensive new graduate nurse transition program, comprised of clinical and non-clinical components, will assist with the transition and also increase retention. Although professional nursing organizations agree with the necessity and encourage the formation of transition programs, no industry standard exists. However, the literature and successful programs instituted in Canada and Australia identify key program components that are essential for program success. The transition programs offered at Navy MTFs are different from each other and fall short of the benchmark programs.

The multivariate analysis of new Nurse Corps officer cohorts from 1994–1998, contained in this thesis, illustrated that being assigned to one of the Navy's large medical centers had no statistically significant effect on retention compared to being assigned to a smaller hospital. While this information is relevant, it is also limited and should be viewed with caution. The study represents a baseline for Nurse Corps retention because it is based on the period prior to the start of the new transition programs within Navy Medicine.

B.   CONCLUSIONS

A multivariate regression analysis showed that being stationed at one of the large Navy medical centers for the first duty station assignment did not significantly affect retention. A new nurse assigned to one of the Big 3 is no more likely to retain in the Navy than a nurse assigned to one of the Navy's smaller hospitals. However, the period the data set covered did not adequately evaluate the newly implemented graduate transition

programs. Data was not available after the establishment of the new programs. It would be beneficial to assess the efficacy of the new programs.

There is no standardized new graduate transition program throughout the Navy. Each facility has developed its own training, encompassing many of the same elements, yet not providing a universal format. The fundamentals of organizational and general nursing orientation are basically the same, but the programs vary in length, preceptor training, and content. None of the programs contain all of the essentials recommended in nursing research and in the professional literature.

Nurse Corps authorizations are constrained by Congressional mandates, fiscal limitations, and the fact that it promotes from within the organization. Yet, due to missed recruiting goals and retention difficulties, inventory at the pay grade of Lieutenant remains low. Current recruiting goals reflect efforts to decrease the shortage by increasing the promotion pool. However, the larger number of entry-level officers creates a problem for billeting, training, and deployments.

Each of the Navy MTFs has an established number of billets for Ensigns. These billets were derived from the manpower requirements needed to complete the mission, the support capabilities of the facilities and the number of Ensigns in the Navy. For instance, the larger medical centers would be able to accommodate more new graduates than a smaller hospital because they have a larger patient census and more nursing units in which to train the nurses. However, with the increased number of Ensigns in the Navy, the MTFs are receiving more officers than there are in excess of Navy Manning Plan for Officers (NMP-O); therefore, they are being placed in Lieutenant Junior Grade and Lieutenant billets. This creates a false perception of knowledge and skill level. A newly accessed Nurse Corps officer has a designator of 2905 and a subspecialty code that indicates a generic nurse with no experience. This subspecialty code changes with experience and/or education level. Once augmentation from Naval Reserve to regular Navy status occurs, the designator becomes 2900. However, this distinction does not signify rank or experience level.

Navy Medicine has a peacetime mission and a wartime mission. Readiness and the care of the warrior are the primary components of the wartime mission. While trauma and inpatient care play a role, both of the components of the wartime mission, as well as the peacetime mission, are heavily reliant upon outpatient and ambulatory care. Additionally, medical care, in general, is focusing on outpatient and ambulatory care due to technological innovations and advancements in medical procedures.

New graduates need exposure to as many training opportunities as possible; therefore, the fundamentals of nursing practice are taught in an inpatient setting because that is where the most invasive procedures and complicated disease processes can be observed. This is very difficult to accomplish with the increased numbers of Ensigns in training pipelines, the decreased numbers of Lieutenants who would make up the training force, and the increased deployment tempo that depletes the available training force even more. The new graduates must be placed on the inpatient units and are being trained by other Ensigns with less than a year of clinical experience, while a limited number of experienced nurses fill ambulatory staffing requirements. This results in a less than desirable training environment for the new graduate and could have long-term ramifications on readiness and the ambulatory care of warriors and beneficiaries.

C.   RECOMMENDATIONS

The primary recommendation is to create a standardized nurse transition program that is evidenced-based and supported by nursing research and literature, to be implemented throughout the Navy. The program should contain clinical and non-clinical components, utilize existing cooperative training agreements with civilian facilities and establish new agreements with trauma and simulation centers such as the one at Naval Medical Center San Diego. Metrics to measure effectiveness need to include more than just retention. Metrics should include patient care outcomes, patient acuity and census statistics, and patient satisfaction feedback. Prior to creating or implementing such a program, it is advisable to complete a cost-benefit analysis to assess the feasibility of a standardized Navy-wide new graduate transition program. One caveat to an analysis is not to focus only on the retention benefits or costs. The analysis should include the

savings from improved patient care, such as fewer patient return visits. The research indicates that by instituting a proper transition training program comprised of evidence-based nursing practice, the Nurse Corps can maximize a key retention tool.

Frequent deployments and the strain it causes professionally and personally are two of the reported reasons for leaving the Navy. Nurses are being deployed OCONUS with less than a year of clinical experience. They are not prepared clinically or professionally for the strain associated with deployments. Alleviating some of the stressors would increase professional development, improve clinical capabilities and strengthen the Nurse Corps' foundation. For deployment billets identified as rotational, a Global War on Terrorism Support Assignment (GSA) deployment model should be developed to send the nurse between permanent-change-of-station moves. This will allow the Nurse Corps to identify and develop critical care sets and give the new nurse an opportunity to develop into a professional nurse and Naval Nurse Corps officer.

D. FURTHER RESEARCH

Consideration was made to estimate a second regression using retention as a factor of mid-level hospital assignment, but was rejected due to the cohort dates covering the period prior to the implementation of the new nurse transition programs. However, until a standardized program is put into operation, any evaluation would be fruitless because it would not be able to isolate the effects of a single program.

A follow-on study using data from cohorts who participated in the new nurse transition programs would be beneficial to assess the effects of the programs on retention. Due to the number of Nurse Corps officers deployed during their first duty assignment, a study assessing retention rates of these officers versus those who deploy for the first time during their second tour, or not at all, would be an asset for planning and developing future deployment standards. Another area of future research would be to explore the role organizational culture may play in the lack of establishing a consistent nurse training programs at the major medical centers, mid-level, and smaller commands.

This thesis has identified some opportunities for the Nurse Corps to evolve and continue to be a leader in nursing innovation. Investment in young Nurse Corps officers

will pay dividends in improved patient care, fewer negative patient care incidents, ability to maintain larger patient loads, and to prepare better preceptors for future NC generations. The recommended changes will require sacrifice, commitment and a change in organizational culture to create and implement, but will strengthen and develop the Navy Nurse Corps.

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APPENDIX A.

Nurse Corps Professional Review Board: Evaluation Criteria Guidelines for Fully Qualified Applicants

Personal Qualities	Professional Growth and Accomplishments	Leadership Skills Competence	Nursing Skills Competence	Academic Performance
• Personifies the "whole person" concept. ---- physically fit, intelligent and socially responsible. • Strong interpersonal and communication skills. • Demonstrated concern for the welfare of others. • Unquestionable personal integrity and citizenship. • Responds well to change; welcomes increased responsibility and challenge. • Demonstrated responsible work habits and dedication to duty. o Team player; positive influence on others. • Strong motivation and desire to join the Navy Nurse Corps.	• Evidence of ongoing professional growth in specialty area. • Active member of professional organizations. • Successful past or current military affiliation documented in evaluations, FITREPS, and recommendations. • Active in community, volunteer or extracurricular activities.	• Assumed leadership responsibilities in clinical setting achieving desired positive outcomes. • Demonstrated leadership during past or current military affiliation documented in evaluations, FITREPS, and recommendations. • Active leader in community, volunteer or extracurricular activities. • Leadership position in professional organizations or work setting committees. • Demonstrated leadership potential as a student.	• Demonstrated problem solving and decision-making skills in clinical setting. • Demonstrated professional behavior in work setting; caring and positive attitude. • Professional RN: evidence of current state licensure. • Demonstrated clinical competence in current and past RN positions. • Evidence of current specialty certification if practitioner, midwife or anesthetist. • Positive specialty leader recommendation if practitioner, midwife or anesthetist. • Student: demonstrated clinical competence during assigned clinical rotations. • Demonstrated ability to appropriately translate theoretical concepts into practice.	• Minimum GPA of 2.5 for new - graduate applicants, unless the applicant has passed the NCLEX. • NCP applicants should have a minimum of 3.0 GPA in accordance with program authorization.

Attachment (2)

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APPENDIX B.

Specialty Components (From Our Hospitals And Clinics, 2010; Our Services, 2010 Welcome Aboard, 2010; Welcome to Naval Hospital Bremerton, 2010; Our Programs and Services, 2010; What We Do, 2010; Patient Services, 2010; Specialty and Sub-Specialty Clinics, 2010; Health Care Services, 2010)

	NNMC	NMCP	NMCSD	UCSF	Pitt	NHJax	NHBrem	Alvarado	CHOMP
Adolescent Clinic		X		X	X				X
Allergy & Imm.	X	X	X	X	X	X	X		
Abm. perfusion	X		X	X	X	X	X		
APU	X	X	X	X	X	X	X	X	X
Bariatric	X	X	X	X	X			X	X
Sports Medicine	X		X	X				X	
Breast Clinic	X	X	X	X	X		X	X	X
Cardiology	X	X	X	X	X		X	X	X
Cardiothoracic Surgery	X	X		X	X				
Chiropractic	X						X		
Cytogenetics				X					
Dental/Oral & Maxillofacial Surgery	X	X	X	X	X		X		
Dermatology	X	X	X	X	X		X		X
DH/IMR	X	X	X	X	X				X
Electro-Convulsive Therapy				X					X
Emergency Medicine	X	X	X	X	X	X	X	X	X
Endocrinology	X	X	X	X	X				
ENT	X	X	X	X	X	X	X	X	X
Family Maternal Infant Care	X	X	X	X	X	X	X	X	X
Family Medicine	X	X	X	X	X	X	X		X
Gastroenterology & Endoscopy	X	X	X	X	X		X	X	X
General Surgery	X	X	X	X	X	X	X	X	X
Heart & Vascular Care	X	X	X	X	X				X
Hematology & Oncology	X	X	X	X	X			X	X
Infectious Diseases Clinic	X	X		X	X				
Intensive Care Unit	X	X	X	X	X		X	X	X
Internal Medicine	X	X	X	X	X		X	X	X
Maternal-Fetal Medicine	X	X	X		X				
Neonatal Medicine	X	X	X	X	X				X
Nephrology	X	X	X		X				
Neurodevelopmental Pediatrics	X	X	X	X	X	X	X		
Neurology	X	X	X	X	X	X		X	X
Neurosurgery	X	X	X	X	X				

Nuclear Medicine	X	X	X	X	X		X		X
Ophthalmology	X	X	X	X	X	X	X		
Orthopedics	X	X		X	X	X	X	X	
Pediatric Subspecialties	X	X	X	X	X		X		
Pediatrics	X	X	X	X	X	X	X	X	X
Pediatric Intensive Care	X	X	X	X	X				
Physical Therapy	X	X	X	X	X		X		
Plastics and Reconstructive Surgery	X	X	X	X	X				
Podiatry	X	X		X	X				X
Psychiatry	X	X	X	X	X	X	X		X
Inpatient Psych	X	X			X				
Psychology	X	X	X	X	X	X	X		X
Radiology/Oncology	X	X	X	X	X			X	
Rehab				X	X			X	X
Respiratory Therapy	X	X	X	X	X	X	X	X	X
Rheumatology	X	X	X	X	X				
Substance Abuse Rehabilitation	X		X		X				X
Swallow Center				X	X				
Transplant Clinic				X	X				
Urology	X	X	X	X	X	X		X	
Vascular		X	X	X	X			X	X
Wound & Ostomy	X	X	X	X	X			X	X

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