



NURSES IN WAR

Voices from Iraq and Afghanistan

Elizabeth Scannell-Desch • Mary Ellen Doherty



SPRINGER PUBLISHING COMPANY

Nurses in War

Elizabeth Scannell-Desch, PhD, RN, is a retired colonel in the U.S. Air Force Nurse Corps. For 25 years, Dr. Scannell-Desch served her country, holding many key leadership positions, including command nurse executive for the entire Air Force Reserve at Headquarters, USAF, the Pentagon; command nurse executive for the Air Force Material Command, Wright Patterson AFB, Ohio; chief nurse officer for the 48th Fighter Wing Hospital, RAF Lakenheath, United Kingdom; chief nurse officer at Robins AFB Hospital, Georgia; assistant chief nurse officer at Mather AFB Hospital, California; clinical positions as a flight nurse with the Second Aeromedical Evacuation Squadron covering Europe, the Middle East, and Africa; and USAF air transportable hospital chief nurse, emergency room charge nurse, medical inspector general's staff, nursing practice coordinator—surgical, oncology nurse and clinical nurse specialist, and medical-surgical nurse. She served as the consultant to the USAF surgeon general for oncology nursing and nursing research. She holds the tenured rank of professor of nursing at Mount Saint Mary College, Newburgh, New York, and served as the chairperson of the Division of Nursing from 2004 to 2010. She is an active member of the Eastern Nursing Research Society, Sigma Theta Tau International (Xi and Mu Epsilon chapters), American Nurses Association, American Association for the History of Nursing, and Air War College Alumni Association. She has authored many research and clinical articles that have been published nationally and internationally. Dr. Scannell-Desch has presented her research throughout the United States and internationally at scientific meetings in Dublin, Ireland; London, England; and Vienna, Austria. During the summer of 2001, she was a visiting professor at the University of Medicine and Pharmacy, Cluj-Napoka, Romania. Her military decorations and nursing awards are numerous.

Mary Ellen Doherty, PhD, RN, CNM, is an associate professor in the Department of Nursing at Western Connecticut State University in Danbury, Connecticut. Dr. Doherty teaches in the graduate and undergraduate programs. She also serves on the university's Institutional Review Board, which governs all faculty and student research. For more than 25 years, she has been a certified nurse-midwife and has practiced in a variety of settings. Always a pioneer, Dr. Doherty was Founder and President of Concord Nurse-Midwifery Associates, with delivery privileges at Emerson Hospital in Concord, Massachusetts. Other advanced practice roles in her career have included being a family nurse practitioner and a maternal-child clinical nurse specialist. She is a member of the American College of Nurse-Midwives; the Association of Women's Health, Obstetric, and Neonatal Nurses; Eastern Nursing Research Society; Sigma Theta Tau International Honor Society of Nursing (Alpha Tau, Mu Epsilon, and Kappa Alpha chapters); the International Childbirth Education Association; the American Nurses Association; and the American Association for the History of Nursing. Dr. Doherty has authored numerous research and clinical articles on midwifery, widowhood during pregnancy (9/11 and war), therapeutic alliance, and birth-plan decision-making. She is a reviewer for the *Journal of Midwifery and Women's Health* and the *Journal of Perinatal Education*. She has presented her research throughout the United States and at international conferences in Dublin, Ireland; London, England; and Vienna, Austria. Since 2002, she has served the legal system as an expert witness on cases involving maternal and newborn health.

Nurses in War

Voices From Iraq and Afghanistan

Elizabeth Scannell–Desch, PhD, RN
Mary Ellen Doherty, PhD, RN, CNM

 **SPRINGER PUBLISHING COMPANY**
NEW YORK

Copyright © 2012 Springer Publishing Company, LLC

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Springer Publishing Company, LLC, or authorization through payment of the appropriate fees to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400, fax 978-646-8600, info@copyright.com or on the Web at www.copyright.com.

Springer Publishing Company, LLC
11 West 42nd Street
New York, NY 10036
www.springerpub.com

Acquisitions Editor: Allan Graubard
Production Editor: Lindsay Claire
Composition: Manila Typesetting Company

ISBN: 978-0-8261-9383-4
E-book ISBN: 978-0-8261-9384-1

12 13 14 15/ 5 4 3 2 1

The author and the publisher of this Work have made every effort to use sources believed to be reliable to provide information that is accurate and compatible with the standards generally accepted at the time of publication. The author and publisher shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the readers' use of, or reliance on, the information contained in this book. The publisher has no responsibility for the persistence or accuracy of URLs for external or third-party Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

Library of Congress Cataloging-in-Publication Data

Scannell-Desch, Elizabeth.

Nurses in war : voices from Iraq and Afghanistan / Elizabeth Scannell-Desch, Mary Ellen Doherty.
p. ; cm.

Includes index.

ISBN 978-0-8261-9383-4—ISBN 978-0-8261-9384-1 (e-ISBN)

I. Doherty, Mary Ellen. II. Title.

- [DNLN: 1. Military Nursing—United States—Autobiography. 2. Afghan Campaign 2001—United States.
3. Iraq War, 2003—United States. 4. Nurses—psychology—United States. WZ 112.5.N8]

LC classification not assigned

610.69—dc23

2012009725

Special discounts on bulk quantities of our books are available to corporations, professional associations, pharmaceutical companies, health care organizations, and other qualifying groups.

If you are interested in a custom book, including chapters from more than one of our titles, we can provide that service as well.

For details, please contact:

Special Sales Department, Springer Publishing Company, LLC
11 West 42nd Street, 15th Floor, New York, NY 10036-8002s
Phone: 877-687-7476 or 212-431-4370; Fax: 212-941-7842
Email: sales@springerpub.com

This book is dedicated to all nurses who have served in the United States military. Through their steadfast personal commitment, untiring devotion to duty, and selfless dedication to the ideals of our nation, military nurses have provided the highest quality of nursing care in peacetime and in war. Their caring and humanitarian aid to victims of war and disaster all over the globe embodies and exemplifies the spirit and essence of the nursing profession.

Also, this book is dedicated to our mother, Marie Murphy Scannell, who has been our role model as a woman, as a caring and involved person, and as an educator and scholar. Her belief in her twin daughters always knew no bounds. We are eternally grateful for her support, her confidence in us, and her love.

Contents

| | |
|---|-------------|
| <i>Foreword</i> | <i>ix</i> |
| <i>Preface</i> | <i>xiii</i> |
| 1. Historical Roots of U.S. Military Nursing | 1 |
| 2. Deploying to War: An Uncertain Future | 22 |
| 3. Nurses in Harm's Way: More Than I Bargained For | 45 |
| 4. Living Conditions: A Mixed Bag | 54 |
| 5. My Work Place: A Plane, a Tent, or a Trailer | 65 |
| 6. Diversions From War: A Piece of Home | 92 |
| 7. Remembrance of War: Most Chaotic Scene | 102 |
| 8. War Memories: Sensations Etched in My Mind | 115 |
| 9. My Warrior Patients | 128 |
| 10. Caring for the Enemy | 141 |
| 11. Children Caught in the Chaos of War | 151 |
| 12. My Wartime Nursing Stress: I Am a Different Person Now | 163 |
| 13. Kinship and Bonding: My Military Family | 180 |
| 14. Professional Growth: Expanding My Knowledge, Skills, and Abilities | 191 |

| | |
|---|------------|
| 15. Women's Health and Hygiene Experiences | 203 |
| 16. Parental Separation | 218 |
| 17. Homecoming: A Difficult Adjustment | 232 |
| 18. Listen to Me: Advice to Deploying Nurses | 246 |
| 19. Conclusion | 258 |
| <i>Afterword</i> | 265 |
| <i>Glossary</i> | 269 |
| <i>Index</i> | 271 |

Foreword

I can still recall how thrilled I was in early 2011 when I learned my friend and Air Force colleague, Elizabeth “Beth” Scannell-Desch, was going to be writing a book on military nursing along with her twin sister, Mary Ellen Scannell Doherty. I felt so honored when she asked me if I would consider writing the book’s foreword. We agreed I would be sent each chapter of the manuscript as it was written to better enable me to write a meaningful foreword. I was enthralled after reading the first chapter, which gives a concise overview of military nursing through the ages. In the second and subsequent chapters, as readers, you meet the 37 nurses who participated in one, two, or all three of the research studies done by the authors.

Waiting for each chapter and the opportunity to learn about the additional nurses involved in the studies and learn more about their experiences and feelings reminded me of my childhood. It felt like I was a child during summer vacation anxiously waiting for the mailman to bring the latest issue of the *Weekly Reader*. I couldn’t wait to receive and read each new chapter of *Nurses in War: Voices From Iraq and Afghanistan*. The nurses are so articulate at vividly describing what they were experiencing and feeling while deployed. After reading it in its entirety, I feel privileged to share some introductory thoughts with you in the foreword to this book.

After 40-plus years as a nurse, it has been my experience that the vast majority of nurses and society as well do not understand how military nursing—in particular, combat nursing—is unequalled. Even though the knowledge, skills, and abilities are constant, the combat setting adds additional and distinct stressors to the delivery of nursing care.

Military nursing is a unique career. Their love of country is first and foremost the reason why many individuals choose to make the military a career. When commissioned into one of the military services, certain rights and freedoms are forgone to assure these same rights and freedoms for citizens and residents of our great nation.

Nurses in War provides valuable insights into what separates military nursing from civilian nursing. The mission of each of the military services is to support and defend the United States of America against all enemies, foreign and domestic. Military nurses care for patients and provide nursing care in military settings similar to most civilian nursing settings. This peacetime delivery platform allows military nurses to maintain their knowledge, skills, and abilities for their combat-readiness mission should our country find itself at war or in a conflict. It is the unusual setting in which care is provided that sets combat nursing apart from nursing provided in peacetime military and civilian settings.

Most books written about military nursing in past wars and conflicts like Vietnam and World War II were published a decade or more after the war ended. This book is being published while our country is still involved in the Afghanistan war and just months after our country marked the 10th anniversary of the start of the wars in Iraq and Afghanistan. *Nurses in War* is extremely timely. The evidence from these research studies will be beneficial to every level of military nursing and the health care system. From chief nurse officers to staff nurses, this book will enable any nurse to be better prepared to deploy and/or to support those nurses who will or who have deployed.

As the 12th chief nurse of the Air Force Nurse Corps and the past director of medical readiness for the Air Force Medical Service from 1995 to 2000, I can personally attest to the importance of this book to health care leaders, in particular, military leaders. It is a book every nurse should read, especially military nurses. For nurses who will be deploying, it will give accurate information regarding what to expect while deployed. For those nurses who have not deployed, it will provide you with a realistic understanding of what family, friends, and colleagues who have deployed or will deploy will be experiencing. It will enable the reader to be more supportive when nurses who have deployed transition back into the peacetime health care delivery system post-deployment.

Nurses in War embodies the core values of each of the military services and is a personal testament to the integrity, excellence, selflessness, devotion to duty, courage, and commitment that exemplifies military nursing. The compelling first-person accounts of the challenges of combat nursing are readable and extremely informative. The authors' layout of the book coupled with the lived experiences of these 37 nurses will make an indelible

impression. It is a step-by-step portrayal of the deployment experience. It starts with the assignment process to Iraq and Afghanistan and ends with the transition process back to the United States. It addresses every aspect of deployment comprehensively but not in a boring or repetitive manner. As a reader, this is as close as you will probably ever come to experiencing combat nursing unless you deploy to a war zone or an area of conflict. It is a realistic portrayal of nurses in war.

There is a growing body of nursing literature based on research addressing military nursing. Nursing research is not the passion of all nurses, nor does it excite every nurse. But Beth's and Mary Ellen's sharing of their three research studies in this book is unlike most published nursing research. Their book is an enjoyable and an extraordinarily interesting read. I guarantee it will be a book you will finish, and you will always remember some of these personal and moving vignettes. If you are a nurse, it will make you extremely proud of your chosen profession. And if you also chose to serve our great nation by wearing the uniform of one of the military service branches, it will make you even more proud of your decision to make military nursing one of your career choices.

In closing, I know *Nurses in War: Voices From Iraq and Afghanistan* made me proud of both of my career choices, nursing and military service. This book should be in every nurse's personal library. It has a well-deserved place of honor in my own nursing literature collection.

Brigadier General Linda J. Stierle (Retired)
United States Air Force

Preface

They came from the plains of west Texas, the commuter suburbs of New York City, or the heartland of Iowa. Some were parents with young children, whereas others were recent college graduates. A few were of Italian American descent, whereas others were African Americans or Irish Catholics. A few grew up in blue-collar industrial neighborhoods, whereas others were reared on Cape Cod. What did this mix of human diversity have in common? What was the glue that bound them together? They were all nurses. Most of them were women. They all took an oath to support and defend their country and to wear America's uniform. Most importantly, they all answered their country's call to serve in peacetime and in wartime. They were U.S. military nurses. Since 2003, these nurses have found themselves in places like Mosul and Tikrit, Iraq, or in Mazer-e-Sharif and Kandahar, Afghanistan. Although they were nurses, they carried weapons to defend themselves and protect their patients. They had no immunity to the horrors and dangers of war. As mortars and rockets landed in their hospital compounds, they continued to provide nursing care to wounded soldiers, enemy insurgents, and burned and maimed local nationals caught in the chaos of war. This book is their story.

More specifically, this book derives from three qualitative research studies examining the lived experience of military nurses in the Iraq and Afghanistan wars from 2003 to 2010. In the first study, 37 U.S. military nurses voluntarily told their stories of deployment; experiences of living and working in the war zone; and homecoming and readjustment to their families, stateside work environments, and communities. The sample for this study included 33 female and 4 male nurses. Within this sample, 18 nurses were

from the Army Nurse Corps, 15 were from the Air Force Nurse Corps, and 4 were from the Navy Nurse Corps. All four male nurses were from the Army (Scannell-Desch & Doherty, 2010).

The second study focused on 24 female nurses' health and hygiene experiences during deployment to Iraq or Afghanistan. We wanted to explore the topic of women's health and hygiene because most deployed nurses were women, and the findings of the first study suggested that this was an area of concern for the nurses. The sample of 24 nurses was a subset of participants from the first study. Because the second study was conducted a year after the first study, several women from the first study were no longer available. Several were redeployed. Others had moved on to overseas assignments or could not be located because of reassignment or retirement (Doherty & Scannell-Desch, in press).

The third study examined the experience of parental separation for nurse-parents deployed to Iraq or Afghanistan. Again, we wanted to explore parental separation because it was an aspect of deployment from the first study that warranted further focused research investigation. Twenty men and women from the first study indicated that they were parents and agreed to be interviewed for the third study. Eleven were from the Army Nurse Corps, six were from the Air Force Nurse Corps, and three were from the Navy Nurse Corps. Sixteen nurse-parents were women, and four were men.

We used Colaizzi's (1978) phenomenological method to guide discovery of the lived experience of military nurses in all three of our research studies. Phenomenology is the study of human experience from the perspective of those experiencing a particular phenomenon. The phenomenon could be, for example, the experience of working in a combat support hospital, taking care of war-injured children, or losing a friend or colleague in a terrorist attack. Phenomenologists appreciate the importance and value of looking at the world through the variety of phenomena in human experience. Phenomenology seeks to describe the essential structures embedded in the phenomena under study (Husserl, 1970). Colaizzi's (1978) method includes elements of both descriptive and interpretive phenomenology.

The population in the first study consisted of male and female deployed military nurses. The second study on health and hygiene concerns only included a sample of deployed female nurses. The third study only included a sample of male and female nurses who were parents. Nurses in all three studies served in the Army, Navy, or Air Force in Iraq or Afghanistan during the war years 2003 to 2010. This included nurses assigned to aeromedical evacuation aircraft as well as those serving on mobile surgical teams, in combat support hospitals, in Iraqi or Afghan hospitals, and in hospitals for detainees. Sampling criteria included that study participants be: (a) a

registered nurse; (b) able to read, write, and speak English; (c) a current or former member of the Army, Navy, or Air Force Nurse Corps; (d) able to recall experiences as a military nurse, and (e) willing to discuss war experiences. This group included active-duty and reserve Nurse Corps members. Contact information for all nurses who met these criteria was not centrally available, so a purposive sample was drawn using “snowball sampling” (Polit & Hungler, 2000) and calls for voluntary participation.

One researcher was acquainted with two nurses who met the sampling criteria, and both agreed to participate. These nurses contacted other nurses who met the criteria, and more nurses agreed to participate. This researcher also knew an Air Force nurse assigned at headquarters, who sent out an electronic synopsis of the study aims and a call for potential subjects. This electronic message yielded more potential subjects. The second researcher knew an Army Nurse Corps reservist and a retired active-duty Army nurse. She contacted these nurses, and both provided contact information for more potential study participants. Successive respondents were selected for participation in these studies while data collection and analysis progressed. These procedures served to broaden the scope, range, and depth of information (Denzin & Lincoln, 2000).

Interview settings were chosen by participants. Locations included residences, offices, parks, and restaurants. Interviews ranged from 45 to 90 minutes. Most interviews were conducted face to face. Owing to geographical constraints, several interviews were conducted by telephone. All face-to-face interviews took place in the eastern United States, whereas most telephone interviews included nurses in the western United States.

Data-generating open-ended questions guided the interview process in all three studies. We used an interview guide of four questions for the first and third studies and five questions for the second study. Follow-up questions were asked to clarify thoughts, feelings, and meanings of what was expressed, and to gain a deeper understanding. Reflective questions were asked, whereas suggestive questions were avoided.

The three study proposals were approved by institutional review boards where the investigators were employed, as well as by the funding agencies. Before commencing interviews, participants were mailed written explanations of the purpose and nature of the study. Once informed consent forms were returned, an investigator contacted potential participants by phone; verbally discussed the purpose of the study, informed consent, and study withdrawal procedures; and set up a date and time for the interview. Participation was voluntary and could be withdrawn at any time. Participants were informed of immediate availability of a mental health nurse practitioner, if needed, because of possible emotional upset due to recall of war experiences. Procedures about how data would be collected,

analyzed, used, and stored were explained. Interviews were audio-recorded for transcription and analysis. Data collection for each study took place over a 5-month period for 3 consecutive years and continued until saturation occurred without discovery of any new themes.

Data for all three studies were analyzed using procedures adapted from Colaizzi (1978). Tapes were listened to several times by both investigators to gain familiarity with content, feeling, and tone. After verbatim transcriptions were made, respondents' descriptions were reviewed. Significant statements were extracted and categorized into thematic clusters for each study. Findings were integrated by the investigators into a thick exhaustive description of the lived experience. Although all experiences and interview content were appreciated and valued, within the confines of this book, it was not possible to include all interview statements. Because there was redundancy within answers to the research questions, statements that best captured the essence of an experience in our judgment were those we included in this book.

The reader will be introduced to each of the 37 nurses in the first half of the book, whose stories vividly relate the emotional, clinical, physical, and experiential stresses and strains of living and working in a war zone thousands of miles from the comforts and safety of home and family. They impart their roles in the austere and harsh environments where they provide combat casualty care. Some were volunteers for these roles, whereas others were deployed when their units were mobilized for war. Their stories capture the essence of the hardships, emotions, sounds, sights, and casualty care milieu found in a wartime nursing environment. Their stories form a tapestry of nursing experience within these two wars.

Because this book is representative of three research studies, the names and some of the demographic details about each nurse have been changed to maintain the anonymity of our research study participants. All study participants signed informed consent documents and agreed to have their interview comments repeated in scholarly presentations of this research as well as published in print media such as nursing journals and books. Any statement enclosed in quotation marks was recorded in a formal interview and represents that individual's recollection of events leading up to, during, and after their deployment to Iraq or Afghanistan. The quoted statements are the opinions and recollections of the people who expressed them. They do not constitute an official position of the Department of Defense or the military services.

For every military nurse who served in Iraq or Afghanistan during the war years 2003 through 2010, there is a story. Their stories contribute to the history of U.S. military nursing and add to the developing body of knowledge about nursing in war. This book gives the nurses a voice.

We are grateful to the nurses who shared their personal accounts with us. We acknowledge and respect their courage, dedication, and commitment as they ventured into harm's way to provide timely life-saving care to those injured by explosive projectiles and gunfire. The care they provided stretched across cultural and ideological boundaries to include U.S. and coalition troops as well as contractors, insurgents, detainees, local villagers, and children.

At Springer Publishing, we thank Allan Graubard, executive editor, for championing the need and demand for this book. His thoughtful advice along the way is greatly appreciated.

We are indebted to Brigadier General Linda Stierle, USAF, NC (ret.), and Major General Melissa Rank, USAF, NC (ret.), for review of our manuscript and many helpful suggestions. Our heartfelt thanks go to Colonel Jennifer Wilber, USA, NC (ret.), and Colonel Linda Kisner, USAF, NC (ret.), for their help in advertising our research studies to potential participants. We also want to thank our family—Len, Chris, Meaghan, Marie, Sadie, and Max—for their patience, support, and belief in us and in this book. We acknowledge support of the granting agencies, Connecticut State Universities/American Association of University Professors and Foundation of New York State Nurses in funding the three research studies defined in this book.

It is our hope that the nursing voices of the Iraq and Afghanistan wars will contribute to future improvements and training for those who will follow. We believe that the nurses' stories will inspire and guide future generations of nurses.

REFERENCES

- Colaizzi, P. (1978). Psychological research as the phenomenologist reviews it. In R. Valle, & M. King (Eds.), *Existential-phenomenological alternatives in psychology* (pp. 48–71). New York, NY: Oxford Press.
- Denzin, N., & Lincoln, Y. (2000). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.
- Doherty, M. E., & Scannell-Desch, E. A. (in press). Women's health and hygiene experiences while deployed in Iraq and Afghanistan during the war years 2003–2010. *Journal of Midwifery and Women's Health*.
- Husserl, E. (1970). *Crisis of European sciences and transcendental phenomenology*. Evanston, IL: Northwestern University Press.
- Polit, D., & Hungler, B. (2000). *Essentials of nursing research: Methods, appraisal and utilization*. Philadelphia, PA: Lippincott, Williams and Wilkins.
- Scannell-Desch, E. A., & Doherty, M. E. (2010). Experiences of U.S. military nurses in the Iraq and Afghanistan Wars, 2003–2009. *Journal of Nursing Scholarship*, 42(1), 3–12.

Historical Roots of U.S. Military Nursing

Although this book tells the stories of U.S. military nurses in Iraq and Afghanistan during the war years of 2003 to 2011, it is important and timely to provide contextual and historical information about the roots of military nursing. To do so, we must start with the world's most famous war nurse, Florence Nightingale.

Florence Nightingale is most prominently known and revered for her work in caring for British soldiers in the barracks hospital in Scutari, Turkey. In March 1853, Russia had invaded Turkey. Britain and France, alarmed about the growing imperialism of Russia, went to Turkey's aid. This conflict became known as the Crimean War (Kalisch & Kalisch, 2004). The Crimean War was the first distant war covered by British war correspondents. News from the Crimean region marked the first time the British public was regularly informed of the actualities of war. War correspondents for British newspapers reported the deplorable and neglectful treatment of wounded and sick British soldiers. They described how, soon after the British soldiers arrived in Turkey, they began contracting cholera and malaria. Within a few weeks, an estimated 8,000 soldiers were suffering and dying from these two infectious diseases. These reports so angered the people of Britain that there was a public outcry for British intervention (Hobbs, 1997).

In early October 1854, Florence Nightingale, a woman from a prominent British family, who had trained as a nurse in France with the Sisters of Charity and in Germany with the Protestant Deaconess nuns, offered her services to the British War Office after being contacted by her friend, Sidney Herbert, the British Secretary for War. Nightingale was promised full

support from the War Office and the British Army if she accepted the challenge to lead a group of British nurses to the British Army Garrison in Scutari, Turkey (Bostridge, 2008). On October 21, 1854, Nightingale and her group of 38 female volunteer nurses, many of them Roman Catholic and Anglican nuns, began their travel to Turkey to take over nursing responsibilities in the Scutari barracks hospital (Donahue, 1985).

These women found the conditions at the hospital in Scutari truly appalling. The soldiers were kept in open bays without beds; blankets; towels; clean bandages; medicine; and sufficient amounts of uncontaminated food, eating utensils, and clean water (Kelly & Joel, 1995). Soldiers were still clad in their service uniforms, which were filthy from the dirt of the battlefield. Open wounds and bodies enveloped with cholera or malaria were infested with vermin. The barracks hospital reeked of rotting flesh, infected tissue, and human excrement (Dossey, 2000).

Nightingale and her band of volunteer nurses worked diligently to bring order to the chaos they found at the barracks hospital. They instituted measures to clean up the environment by improving hospital sanitation practices through boiling water, opening windows and doors to allow for improved ventilation, and securing cooking utensils for meal preparation (Bostridge, 2008). Nightingale instituted wound-cleaning measures, established schedules for bandage changing and hot-meal preparation, and introduced proper waste disposal and disinfection of hands and other surfaces using soap and water. She also began recording the measures she took to improve conditions at the hospital and the results in terms of infection rates and other hospital statistics. The sanitary measures she employed dramatically reduced the hospital infection rates and overall mortality rates (Donahue, 1985).

Army commanders and military physicians opposed Nightingale's views on reforming and improving the barracks hospital. They interpreted her comments about the deplorable conditions and the measures she enacted to improve the health and hygiene practices at the hospital as an assault on their competence to manage the hospital and to provide care for their soldiers. As a result of this friction between Nightingale and the military hierarchy in Scutari, Nightingale and all of the nurses were made to feel unwanted and unappreciated (Kalisch & Kalisch, 2004).

Although Nightingale and her team had cleaned up the barracks hospital and added many sanitary and quality-of-life improvements for their soldier-patients, broad-based change did not happen overnight. The British War Office, at the urging of Nightingale, ordered the sanitary commissioners at Scutari to carry out immediate reforms, including revamping and unclogging the hospital's defective sewers and improving sick bay overcrowding and ventilation. By June 1858, the death rate had declined from 42% to 2% (Bostridge, 2008). Although Nightingale cannot be credited solely for the

dramatic decline in the death rate, her efforts to improve the sanitation, hygiene, nutrition, and quality-of-life of the soldier-patients at the barracks hospital certainly contributed significantly to this end (Hobbs, 1997). After her tour of duty at Scutari, she went on to assist the British War Office with improvements in other war hospitals. Later, when she returned to England, she expanded her involvement by starting a nursing school, serving in health- and nursing-related posts, and authoring several texts for nurses.

The Crimean War emphasized the significant work of Florence Nightingale and her team serving the British Army in a war zone. This work led to the development and implementation of modern nursing methods and practices throughout the world and served as a foundational step in formalizing military nursing for the future.

EARLY NURSING IN THE UNITED STATES

The historical roots of military nursing in the United States can be traced back to before the founding of our nation. When the fight for independence began in 1775, untrained nurses served on the battlefield as wound dressers and water bearers (Donahue, 1985). General George Washington needed to provide for the medical care of his wounded soldiers, and there were too few men available to serve as nurses. Washington found meaningful work for the wives, mothers, daughters, and sisters of his soldiers who followed their encampments. The Continental Army offered these women employment as nurses, cooks, laundresses, and water bearers, thereby releasing male soldiers to fight. The Continental Army medical corps was authorized to employ one nurse for each 10 sick or wounded soldiers. Since most medical care at the time was provided in the home by women, training programs for nurses were nonexistent in the colonies. Therefore, whatever skills these women brought to war came from home experience or were learned as needed on the battlefield. These nurses were paid a few dollars per month and a daily ration of food and water (Kelly & Joel, 1995).

THE WAR OF 1812

The War of 1812 was fought between the United States and the British Empire. The United States declared war for a variety of reasons. The most prominent included U.S.-preferred expansion into the Northwest Territory, trade restrictions imposed owing to Britain's ongoing war with France, and British support of U.S. Indian tribes against U.S. territorial expansion. The war was primarily naval in scope, although ground troops were also involved (Donahue, 1985).

Female assistance in the War of 1812 was limited to making bandages, preparing meals, and tending to sick and wounded sailors. Untrained nurses served on Commodore Decatur's ship, the *United States*, caring for wounded sailors. This was the first time women nurses served on a naval vessel. Nurses employed by the Navy were generally wives and widows of sailors (Donahue, 1985).

THE U.S. CIVIL WAR

As we know, the main cause of the Civil War was the practice of slavery in the southern states. Politicians and slave owners in the South became angered at the antislavery factions in the North, especially because of northern attempts to block expansion of slavery into the Western territories. Southern slave owners believed that restrictions on slave ownership violated states' rights. The election of President Abraham Lincoln resulted in declarations of secession from the United States by slave states of the Deep South and their formation of the Confederate States of America. Fighting began in April 1861 when Confederate forces attacked Fort Sumter, a major fortress held by the United States on land claimed by the Confederacy (Kalisch & Kalisch, 2004).

When the Civil War began, there was no organized system within the Union or Confederate armies to care for wounded and ill soldiers. When calls came out from the two respective armies for volunteers to perform nursing duties, women rushed to join (Kelly & Joel, 1995). The Union Army secretary of war appointed Dorothea Lynde Dix, a former schoolteacher and advocate for human rights and mentally ill persons, as superintendent of Women Nurses for the Union Army (Kalisch & Kalisch, 2004).

By 1862, large military hospitals were being built by both the Confederate and Union armies. Since construction took considerable time, buildings of opportunity such as schools, churches, plantation homes, and factories were used as interim hospitals. Women provided casualty care for Union and Confederate troops at field hospitals and on the Union Hospital Ship *Red Rover*. Those serving included prominent women such as Dorothea Dix, Clara Barton, Mary Bickerdyke, and Louisa May Alcott, who organized nurses and provided support to Union Army casualties, and Walt Whitman, who served as a battlefield wound dresser (Kelly & Joel, 1995). Around 6,000 women performed nursing duties for the Union and Confederate forces. It is estimated that some 181 Black nurses served during the war in Union Army hospitals. Harriet Tubman and Sojourner Truth were notable Black women who provided care for Union soldiers (Carnegie, 1986).

Many women served as nurses in the hospitals of both the Union and Confederate Armies, often venturing out onto the battlefield to perform the humanitarian service of bringing water to the soldiers or bandaging their wounds. These women earned the utmost respect and gratitude of those they served so bravely and unselfishly. After the end of the Civil War, many training programs for nurses were established at U.S. hospitals, so the era of using untrained personnel to provide military casualty care ended (Kalisch & Kalisch, 2004).

THE SPANISH-AMERICAN WAR

This war originated in the Cuban struggle for independence from Spain that began in 1895. The 1898 conflict between Spain and the United States started after the mysterious sinking of the *Maine*, a U.S. battleship, in the harbor at Havana, Cuba. Prior to the sinking, there had been considerable friction and mistrust in the relationship between Spain and the United States for decades, and the Cuban people had revolted numerous times against Spanish rule of the island. The United States sent an ultimatum to Spain demanding it relinquish control of Cuba. The ultimatum was not accepted, and Spain declared war on the United States (Donahue, 1985).

While the importance of trained female nurses had been demonstrated in U.S. hospitals for several decades after the U.S. Civil War, there were still many physicians and military leaders who questioned whether a field hospital was an appropriate place for a woman. However, the Army surgeon general knew that women would be needed at military base hospitals to serve as nurses and dieticians. Therefore, he appointed both men and women nurses as civilian contract employees for the U.S. Army. At the same time, Dr. Anita Newcomb McGee, vice president general of the Daughters of the American Revolution (DAR), offered to examine all applications referred by the government from women seeking to serve. All applications were forwarded to Dr. McGee, who was permitted by the government to set her own standards. To be considered eligible, a nurse had to be a graduate of a nurse training school and have the endorsement of the school's superintendent. The age limit for these nurses was 30 to 50 years, but exceptions soon needed to be made because of the huge demand for nurses (Kalisch & Kalisch, 2004).

Several Catholic Sisters of Mercy from Baltimore served as nurses at Camp Thomas and the Chickamauga Park Camp in Georgia. The Sisters of Charity from Emmitsburg, Maryland, also provided over 200 nursing nuns to care for the sick and wounded (Donahue, 1985). By August 1898, there were almost a thousand nurses under contract with the demand still

growing, owing to the dreadful epidemic of typhoid fever that erupted that summer in the military camps (Kelly & Joel, 1995). Although the military hierarchy had once again been reluctant to employ women nurses in battlefield hospitals and on naval vessels, by the end of the war, nurses proved their value once again (Donahue, 1985). The war with Spain established the essential need for trained nurses as hastily built army camps for more than 28,000 members of the regular army were overcome by diarrhea, dysentery, typhoid, and malaria. These infectious illnesses took more of a toll on the troops than did enemy gunfire (Kalisch & Kalisch, 2004).

The Spanish–American War marked the United States’ entrance in the world scene as a global power seeking to expand its influence. U.S. forces quickly overcame the Spanish in the Philippines and then moved on to Cuba. Within months, they overwhelmed the Spanish, and Theodore Roosevelt gained the prominence that would lead him to the U.S. presidency (Alger, 1901).

Nursing under wartime conditions required professional competence, physical stamina, courage, personal discipline, and mental toughness. The nurses employed by the U.S. government became known as *contract nurses*. Between 1898 and 1901, more than 1,500 female nurses signed government contracts. Contract nurses served in the United States, Puerto Rico, the Philippines, Hawaii, China, briefly in Japan, and on the hospital ship, Relief. Fifteen nurses died of febrile illnesses while serving (Kalisch & Kalisch, 2004). Owing to the exemplary performance of contract nurses during the Spanish–American War, the U.S. military realized that it would be helpful to have a corps of trained nurses, familiar with military ways, available on an on-call basis. This led the way to the establishment of the Army Nurse Corps and Army Reserve Nurse Corps (Kelly & Joel, 1995).

U.S. ARMY AND NAVY NURSE CORPS ESTABLISHED

On February 2, 1901, the U.S. Army Nurse Corps became a permanent corps of the Medical Department under the Army Reorganization Act passed by Congress. Nurses were appointed to the Regular Army for a three-year period, although they were not actually commissioned as officers in the Regular Army during that period. The appointment could be renewed provided that the applicant had a satisfactory record of nursing performance, professional conduct, and good health. The law directed the surgeon general to maintain a list of qualified nurses who were willing to serve on an emergency basis as a reserve unit of the Army Nurse Corps. On March 25, 1901, Dita H. Kinney, a former Army contract nurse, was officially appointed the first superintendent of the Army Nurse Corps, a position she held until she

resigned in July 1909 (Sarnecky, 1999). In October 1908, the Army Nurse Corps consisted of an initial core group of 20 nurses. Many of them had previous experience serving as Army contract nurses with the military. The Navy Nurse Corps was established in 1908 with 20 women selected as the first members. Esther Voorhees Hasson served as the first superintendent of the U.S. Navy Nurse Corps from 1908 to 1911 (Kalisch & Kalisch, 2004).

WORLD WAR I

Although the assassination on June 28, 1914 of Archduke Ferdinand of Austria, the heir to the throne of Austria-Hungary, was the immediate cause of the war, larger issues tied to imperialism also contributed. Simply, the ambitions of the great powers—Germany, France, Russia, Great Britain, and Italy—to control lands beyond their borders and to harvest their human and material capital, played a key role in fueling the winds of war (Goodspeed, 1985). The Archduke's assassination by a Yugoslav nationalist resulted in the Habsburg ultimatum against the Kingdom of Serbia. Several alliances formed over previous decades were invoked. Within weeks, the major powers were at war, and conflict soon spread around the world (Chickering, 2004).

The United States initially followed a strategy of nonintervention. When a German submarine sank the British ocean liner *Lusitania* in 1915, with 128 Americans aboard, U.S. President Woodrow Wilson demanded an end to attacks on passenger ships. Initially, Germany complied with this request. Wilson repeatedly warned that the United States would not tolerate unrestricted submarine warfare in violation of international law and human rights. In January 1917, Germany resumed unrestricted submarine warfare. After the sinking of seven U.S. merchant ships by submarines, President Wilson called for war on Germany, which the U.S. Congress declared on April 6, 1917 (Chickering, 2004).

When the United States entered the war, military nursing strength was very low. Only 403 Army nurses were on active duty, including 170 reserve nurses who had been ordered to duty in 12 Army hospitals in Texas, Arizona, and New Mexico. The United States stepped up its recruiting efforts, and more than 400 nurses sailed for France for service with the British Expeditionary Forces in May 1917. By 1918, more than 12,000 Army nurses were on active duty serving at 198 bases worldwide. During the course of the war, 21,480 Army nurses served in military hospitals in the United States and overseas (Sarnecky, 1999). More than 1,476 Navy nurses served in military hospitals stateside and overseas. More than 400 military nurses died in the line of duty during World War I (Kalisch & Kalisch, 2004). The vast majority of these women succumbed from a highly contagious form of influenza known as the Spanish flu, which swept through crowded military

camps, hospitals, and ports of embarkation. Several nurses received war-time wounds, but none died because of enemy action (Sarnecky, 1999).

In May 1918, the Army School of Nursing was authorized by the Secretary of War. Courses of instruction began at several Army hospitals in July 1918. Annie W. Goodrich was appointed as Chief Inspector Nurse for the Army. She also became the first Dean of the Army School of Nursing. During World War I, Army nurses did not have officer status. They were not commissioned but appointed into the ANC. Appointment, rather than commission, meant that a nurse lieutenant received less pay than a male infantry commissioned lieutenant (Sarnecky, 1999).

WORLD WAR II (1941–1945)

As we know, World War II began in September 1939 when Germany invaded Poland. There were subsequent declarations of war on Germany by France and the British Commonwealth. The war extended into much of Europe and North Africa. In June 1941, Germany and the Axis powers launched an invasion into the Soviet Union (Adamthwaite, 1992). On September 11, 1941, U.S. President Franklin Roosevelt ordered the Navy and Army Air Corps to shoot on sight at any German war vessel. On December 7, 1941, the United States was attacked by the Japanese in a daring surprise assault on the Pacific fleet at Pearl Harbor, Hawaii. President Franklin D. Roosevelt and the U.S. Congress swiftly declared war on Japan. The German government discontinued diplomatic relations with the United States and declared war on them on December 11, 1941 (Adamthwaite, 1992).

When the United States entered World War II in December 1941, U.S. military nursing assets were at peacetime diminished strength. There were fewer than 1,000 nurses in the Army Nurse Corps and 700 in the Navy Nurse Corps; all were women. Over the next six months, their numbers grew to more than 12,000. Throughout the duration of the war, more than 60,000 Army nurses served in the United States and overseas in every theater of U.S. military operations (Sarnecky, 1999). Sixty-seven Army nurses were captured by the Japanese in the Philippines in 1942 and were held as prisoners of war for over two and a half years (Frank, 1985). More than 14,000 Navy nurses served in the United States and overseas on hospital ships and at naval bases (Link & Coleman, 1955). Five Navy nurses were captured by the Japanese in Guam and held as prisoners of war for 5 months before being exchanged. A second group of 11 Navy nurses was captured in the Philippines and held for 3 years (Norman, 1999).

Military nurses were wounded by enemy fire on the beaches at Anzio, Italy, during the Allied beachhead landings. Nurses were killed in air

evacuation flights and spent time behind enemy lines. They worked closer to the front lines than ever before. Army nurses were on Omaha beach just a few days after the D-Day invasion of Normandy and in North Africa caring for casualties from the tank battles (Hastings & Stevens, 1985).

Although carrying injured soldiers by airplane had been discussed and tried between the World Wars, the usefulness of this means of patient transport became a necessity in World War II. Use of air transport to move injured U.S. troops introduced the advent of a new nursing specialty, flight nursing. The first class of Army Air Corps flight nurses trained at Bowman Field, Kentucky, and graduated in February 1943. Their 6-week course included a curriculum of air evacuation nursing, air evacuation tactics, survival training, altitude physiology, mental hygiene in relation to flying, aircraft loading procedures, cargo aircraft interior reconfiguration procedures, and field bivouac (Link & Coleman, 1955). Following graduation, they quickly began flying aeromedical evacuation missions aboard C-47 transport aircrafts in the European, African, and Pacific theaters of operation. Flight nursing was considered the most dangerous nursing duty, and 17 flight nurses were killed during the war (Donahue, 1985). The war in Europe ended on May 8, 1945, and the war in the Pacific ended on September 2, 1945, with the surrender of Japan (Hastings & Stevens, 1985).

During World War II, the Army Air Corps became a significant, highly specialized, and sophisticated fighting force. Following the end of World War II, the Army Air Corps became a separate service, named the U.S. Air Force, in 1947. Later, in 1949, the Air Force Nurse Corps was established. A segment of the Army Nurse Corps, many of them flight nurses, transferred to the newly formed Air Force Nurse Corps (Barger, 1991). The Army-Navy Nurse Act of 1947 made the Army Nurse Corps and the Women's Medical Specialist Corps part of the Regular Army and gave permanent-commissioned-officer status to military nurses. This legislation put an end to relative rank and the full-but-temporary ranks granted during the middle of World War II. The law also granted military nurses permanent ranks and commissions in the Regular and Reserve Corps equal to the ranks of male officers (Sarnecky, 1999).

THE KOREAN WAR (1950–1953)

As we know, the Korean War was a military action between South Korea and North Korea. South Korea was backed by the United Nations (UN), and North Korea was supported by the People's Republic of China (PRC), along with military ordinance and weaponry supplied by the Soviet Union. The war was a result of the physical division of Korea by agreement of the Allied forces at the end of the Pacific fighting in War World II (Halberstam, 2007).

Following Japan's surrender in 1945, U.S. occupational forces divided the Korean peninsula along the 38th parallel, with U.S. troops occupying the southern part and Soviet troops occupying the northern part. The 38th parallel increasingly became a political border between the two Koreas, with frequent border attacks by the two sides. The situation escalated into open warfare when North Korean forces invaded South Korea on June 25, 1950. The United Nations, principally led by the United States, came to the aid of South Korea in repelling the invasion. The U.S. Army, Navy, and Air Force were employed to aid the South Korean military (Foot, 1985). At the beginning of the conflict, the U.S. Army Nurse Corps active-duty strength was below 3,500 persons, and that of the U.S. Navy Nurse Corps was below 2,000 nurses. The newly established Air Force Nurse Corps yielded fewer than 1,200 nurses (Kalisch & Kalisch, 2004). Many U.S. nursing leaders expected a mass exodus of civilian nurses to join the military, but this exodus never occurred. From 1950 until the end of the Korean War in 1953, the Army Nurse Corps membership rose to a modest 5,500, while the Navy Nurse Corps increased to about 3,200 nurses, and the Air Force Nurse Corps to about 1,800 members (Clarke, 1951; Kalisch & Kalisch, 2004).

During the Korean War, Navy nurses were assigned to hospital ships and at overseas and stateside bases. Three hospital ships, the *Consolation*, *Repose*, and *Haven*, rotated as main seaborne hospitals in Korean waters. Two hundred Air Force flight nurses were quickly engaged in providing air evacuation of wounded soldiers to base hospitals away from the fighting. Although Army Air Corps nurses served as flight nurses in World War II, the specialty of flight nursing really expanded and matured during the Korean War. The Korean War also provided the first real test of the usefulness of the helicopter and the Army's Mobile Surgical Hospital (MASH), a concept that had been born out of assessment of World War II casualty evacuation needs (Kalisch & Kalisch, 2004).

The typical MASH unit included about 15 physicians, 16 nurses, and 120 enlisted medical personnel. The nursing staff comprised 2 nurse anesthetists, 4 operating room nurses, and 10 nurses working on preoperative and postoperative wards. A helicopter unit was assigned to each MASH to provide rapid transport from the area of battle. Once patients were treated, they were either held at the MASH for recovery or, if their injuries would require longer-term care, evacuated by helicopter or air evacuation transport plane to a hospital further to the rear.

As was the case in World War II, Army nurses served in the war zone close to the extremely fluid front lines. As a rule, nurses were the only military women allowed into the combat theater. Nurses served in MASH units, in field hospitals, on hospital trains, and on Army transport ships and Navy hospital ships at the beginning of the war. Once again, nurses found

themselves treating casualties on foreign shores and in the air aboard C-47 and C-54 cargo aircrafts. Army nurses staffed MASH units and standard hospitals in Japan and Korea. Navy nurses served on hospital ships in the Korean theater of operations as well as at Navy hospitals stateside. Air Force nurses served stateside, in hospitals in Japan and Okinawa, and as flight nurses in the Korean theater. Nurses found themselves on the forefront of battlefield medicine, playing a major role in the treatment of wounded UN forces within mere minutes or hours of the wounds being inflicted (Holm, 1982; Hovis, 1992). One Army nurse, 11 Navy nurses, and 3 Air Force nurses were killed during Korean War service (Donahue, 1985).

In 1953, the war ended with an armistice that restored the border between the Koreas near the 38th parallel and created the Korean Demilitarized Zone, a 2.5-mile-wide (4.0 km) buffer zone between the two Koreas. Minor outbreaks of fighting continue to the present day.

Following the end of the Korean War, male nurses were accepted into the Army and Air Force Nurse Corps in 1955. It was not until 1965 that men were accepted into the Navy Nurse Corps (Donahue, 1985).

THE VIETNAM WAR (1965–1973)

There was no fixed beginning for U.S. involvement in Vietnam. The United States entered that war incrementally in a series of steps between 1950 and 1965. In 1950, President Truman authorized a modest program of economic and military aid to the French, who were fighting to retain control of their Indochina colonies, including Laos, Cambodia, and Vietnam. When the Vietnamese Nationalist Viet Minh army defeated the French forces at Dien Bien Phu in 1954, the French were forced to agree to the creation of a Communist Vietnam in the north at the 17th parallel while leaving a non-Communist portion of Vietnam south of that line. The United States refused to accept the arrangement. U.S. President Eisenhower feared the spread of communism throughout Vietnam and sent military advisers to train the fledgling South Vietnamese Army (Lewy, 1977).

In 1961, U.S. President Kennedy sent 400 Special Operations Forces-trained Green Beret soldiers to teach the South Vietnamese how to fight what was called a “counterinsurgency war” against Communist guerrillas in South Vietnam. When Kennedy was assassinated in November 1963, there were more than 16,000 U.S. military advisers in South Vietnam. President Lyndon Johnson committed the United States more deeply to the war. In early 1965, Johnson authorized the sustained bombing of targets north of the 17th parallel, and in March, he dispatched 3,500 combat Marines to South Vietnam (The Pentagon Papers, 1971).

The fundamental reason for U.S. involvement in Vietnam was rooted in the fear that the Viet Minh, then the National Liberation Front (NLF), and the forces of Ho Chi Minh would become agents of global communism. U.S. administrations after the end of World War II through the late 1960s bought into the domino theory, which held that if one nation fell to communism, other nations would follow like dominos lined up on end. U.S. policymakers viewed Vietnam as the first domino in Southeast Asia (Lewy, 1977).

Before the current wars in Iraq and Afghanistan, the Vietnam War was the longest war fought by the U.S. military. Although this was an undeclared war, active U.S. military participation began in 1961 and lasted until early 1973 (Santoli, 1985). Humanitarian military aeromedical evacuations were flown into and out of Vietnam until April 1975 (Scannell-Desch, 1996; Schimmenti & Darmoody, 1986). A total of 2.6 million U.S. military personnel served in Vietnam (Frye & Stockton, 1982), of whom over 250,000 were seriously injured or wounded (Cook, 1988) and over 58,000 were killed or listed as missing and presumed dead (Jones & Janello, 1987).

According to U.S. Department of Defense estimates, between 1962 and 1973, approximately 7,500 U.S. military women served on active duty in Vietnam (Walker, 1985). About 80% of these women were members of the Army, Navy, or Air Force Nurse Corps (Marshall, 1988). Among the more than 58,000 names carved on the wall of the Vietnam Veterans Memorial in Washington, D.C., are those of eight female and two male military nurses. Their names are preserved on the wall along with the sailors, soldiers, airmen, and marines they cared for and died with (Scannell-Desch, 2000a).

The Vietnam War was fought with no discernible front lines, safe places, or clear rules of engagement. Much of the enemy forces did not wear uniforms, and in some situations, it was impossible to distinguish the enemy from pro-U.S. or neutral villagers. These circumstances added a dimension of deception and confusion to the fighting (Gault, 1971; Schwartz, 1987), and soldiers on patrol rarely saw the enemy they were attempting to kill (Freedman & Rhoads, 1987; Santoli, 1981).

In April 1965, with the rapid buildup of American forces in Vietnam, Army nurses were dispatched with medical units to support the fighting forces. The 8th Field Hospital, Nha Trang, had been the only U.S. Army hospital in the country for three years. The 3rd Field Hospital, Saigon, was the first to arrive during the buildup (Freedman & Rhoads, 1987).

Because there were no front lines or consistently secure road systems in Vietnam, the helicopter became the primary means of evacuating casualties from combat to medical facilities. Helicopters, known as “dust-offs,” delivered wounded troops to hospitals or aid stations within minutes of injury (Cook, 1988). As a result of this rapid evacuation, many patients who

would have died in previous wars were kept alive by pressure dressings, intravenous fluids, emergency tracheotomies, and a short flight to immediate surgical care (Freedman & Rhoads, 1987; Schwartz, 1987). As Holm (1982) pointed out, “the record of the Vietnam War in terms of saving the lives of the wounded was unparalleled in the history of warfare. Less than 2% of the casualties treated died as a result of their wounds” (p. 233).

The first Navy hospital opened in Saigon in 1963 (McVicker, 1985). As the war progressed, the Navy established hospitals in Danang and near Cam Ranh Bay (Marshall, 1988). The Danang hospital was completely leveled by an enemy rocket in 1965, injuring several nurses (Donahue, 1985; Martin, 1967). The majority of Navy nurses assigned to the Vietnam theater of operations were stationed aboard two hospital ships, the U.S.N. *Repose* and the U.S.N. *Sanctuary*, which sailed off the coast in the South China Sea. These ships followed the intensity of the fighting up and down the coast, usually between Danang and the demilitarized zone in the north (Marshall, 1988). The U.S.N. *Repose*, for example, was 520 feet long and could accommodate up to 750 patients. The ship was completely air-conditioned and superbly equipped with intensive care units and operating rooms. Battle casualties needing immediate surgery were evacuated to these floating hospitals by dust-offs, sometimes within 5 minutes after injury (Martin, 1967). Navy nurses went on to serve in the Provincial Health Assistance Program at Rach Gia from 1965 to 1968 and at the station hospital at Danang from August 1967 to May 1970. The Danang hospital became the Navy’s largest land-based combat casualty treatment facility, with 600 beds and admissions of 63,000 patients (Holm, 1982).

Air Force nurses worked in large evacuation hospitals, such as the 12th USAF Hospital, Cam Ranh Bay, Vietnam, and at smaller hospitals, called *casualty staging flights*, such as those at Phan Rang, Danang, and Tan Son Nhut Air Base (Martin, 1967). The hospital at Cam Ranh Bay usually operated at a bed capacity of 650 but could be expanded to up to 1,200 beds when necessary. It consisted of 18 Quonset hut wards, most of which were air-conditioned (Marshall, 1988). Air Force flight nurses cared for wounded troops on in-country aeromedical evacuation flights, using the C-7 Caribou, the C-123 Provider, and the C-130 Hercules aircraft. These planes were propeller or turbo-prop cargo aircraft, which were reconfigured to carry patients in litter stations within the rear fuselage. Additionally, the planes could perform in a short takeoff and landing configuration and could safely land on a short dirt strip. When under enemy fire, loading of patients could be accomplished in 1 to 3 minutes as the plane stayed in a slow taxi or takeoff roll. These planes could take off under fire with the back doors still open. This type of loading was referred to as *hot loading* by most flight and aeromedical crews (Scannell-Desch, 1999, 2000b).

Strategic aeromedical evacuation missions carried the more seriously wounded or ill patients out of Vietnam to medical facilities at Clark Air Base, Philippines; Yakota Air Base, Japan; Kadena Air Base, Okinawa, or back to the continental United States (Marshall, 1988; Schwartz, 1987). The aircraft used for these long-range missions was the C-141 Starlifter, which could accommodate up to 77 litter patients in the wartime configuration of 5 patients per tier. Routinely on in-country and strategic aeromedical evacuation missions, a flight nurse served as senior medical authority aboard the aircraft. Physicians rarely served on air evacuation missions (Scannell-Desch, 1996, 1999, 2005).

Flight nurses airlifted more than 400,000 patients between 1964 and 1973. During the height of the Tet 1968 offensive, about 11,000 casualties were airlifted per month (Schimmenti & Darmoody, 1986). Additionally, when Saigon was falling in April 1975, flight nurses airlifted more than 1,000 homeless infants and refugees as part of Operations Babylift and New Life. The last military nurse to die in Vietnam was an Air Force flight nurse, Captain Mary Therese Klinker. She was killed while caring for Babylift children when her C-5 Galaxy aircraft experienced a catastrophic decompression and crashed shortly after takeoff from Tan Son Nhut Air Base, Vietnam (Scannell-Desch, 1996).

The Army sent more nurses to Vietnam than the other services combined. The Army established 27 field, evacuation, surgical, and convalescent hospitals on the coast and at inland locations within the Republic of South Vietnam. Many of these medical facilities were close to the fighting. Inflatable rubber shelters known as MUSTs (medical unit, self-contained, transportable) were shipped to Vietnam for the Army Medical Services; however, the lack of a safe road system severely hampered the mobility of these medical units. These hospitals, therefore, could not follow and support tactical troop movements and other ground operations, so most were converted to fixed permanent medical installations (Donahue, 1985).

Thousands of U.S. Army nurses served in Vietnam between 1962 and 1973. The largest number for any single year was 900 in 1969. Several were wounded, and nine Army nurses and one Air Force nurse died while serving. One Army nurse, 1st Lt. Sharon A. Lane, was killed by hostile fire. The other seven female nurses and two male nurses died in the line of duty in Vietnam (Bigler, 1996). On March 29, 1973, the last of more than 5,000 nurses departed from the Republic of Vietnam, two months after the cease-fire (Freedman & Rhoads, 1987).

CHANGES IN U.S. POLICY AFTER THE VIETNAM WAR

By the mid-1970s, policy changes relating to women serving in the military were long overdue. These policy changes finally paved the way for equal

treatment for women serving on active duty with minor children as family members. In late 1974, the U.S. Supreme Court ruled that inequities in benefits for the dependents of military women were unconstitutional. Until then, military women with dependents were not authorized housing, nor were their dependents eligible for benefits and privileges afforded the dependents of male military members, such as medical, commissary, and post exchange availability. In 1975, the Department of Defense finally reversed its policy and provided pregnant service women with the option of electing discharge or remaining on active duty. The previous policy required that women be discharged upon pregnancy or the adoption of children (Holm, 1982).

THE PERSIAN GULF WAR (1990–1991)

The invasion of Kuwait by Iraqi troops that began on August 2, 1990, was met with international condemnation and brought immediate economic sanctions against Iraq by members of the UN Security Council. President George H. W. Bush deployed U.S. forces to Saudi Arabia and urged other countries to send their own forces to the Persian Gulf. A wide assortment of nations joined the deployment of coalition forces. The majority of the military forces in the coalition came from the United States, Saudi Arabia, the United Kingdom, and Egypt.

The Persian Gulf War (August 2, 1990–February 28, 1991), commonly referred to as the Gulf War, was waged by a UN-authorized coalition force from 34 nations led by the United States against Iraq in response to Iraq's invasion of the sovereign nation of Kuwait. The mobilization buildup of coalition forces was known as Operation Desert Shield, whereas the actual fighting after mobilization became known as Operation Desert Storm. Operation Desert Storm commenced with aerial bombardment of Iraqi troops and bunkers on January 17, 1991. Once targets were softened by airborne assault, the ground war followed on February 23, 1991 (Schwartzkopf, 1992).

Some 40,000 U.S. military women were deployed during Operations Desert Shield and Desert Storm. By January 17, 1991, when the air campaign began, 2,265 Army nurses were serving in the Persian Gulf. At the conclusion of the ground war on February 28, 1991, 2,215 Army Nurse Corps officers were on duty in the Persian Gulf region. As of April 1991, the required strength of the Army Nurse Corps in the Persian Gulf theater was 2,211, and 2,214 Army nurses were assigned there (Sarnecky, 2010). The Army Medical Department mobilization in support of Operation Desert Shield/Desert Storm was enormous, complex, and very challenging. At this time, the Army was converting from its Vietnam-era MUST hospital configuration

with updated deployable medical system equipment and tentage. Many of the units deploying to the Persian Gulf had the MUST equipment. Deploying medical personnel soon discovered that the desert environment severely tested the efficient operation of those medical units that went to war with the MUST setup, and this forced a fast-track substitution of deployable medical systems in many of the Army's medical units (Sarnecky, 2010).

In addition to updating medical material and equipment assets with deployable medical systems, the Army Medical Department was also transitioning to a new doctrine and concept of operations, called Medical Force 2000, at the time of Operation Desert Shield/Desert Storm. Two important changes included far-forward surgical care and enriched psychiatric support. It used forward surgical teams (FSTs), exceedingly mobile portions of the MASH, to provide initial care close to the combat area. The FSTs operated separately from their units of origin by moving with the combat forces to provide far-forward surgical treatment. An FST usually had a staff of 10 officers and 10 enlisted medics. The officer staff usually included two nurse anesthetists, an operating room nurse, one medical-surgical nurse, one critical care nurse, three trauma surgeons, an orthopedic surgeon, and one field medical officer. The enlisted component usually included four emergency medical technicians, three surgical technicians, and three practical nurses. To enhance psychiatric capability, the Army employed combat stress teams staffed by psychiatric nurses, psychiatrists, psychologists, social workers, and chaplains to assess, treat, and efficiently return troops with combat stress symptoms to the battlefield (Sarnecky, 2010).

When the air campaign began, the Air Force had deployed 972 nurses on active duty, of whom 19 were flight nurses, and 872 nurses from the Air Reserve Component, of whom 613 were qualified as flight nurses. This was the largest Air Force medical deployment since the Vietnam War. The Air Force medical deployment in support of Operation Desert Shield began in August 1990. Air Force medical teams were the first medical assets in the Gulf, arriving on the Arabian Peninsula just two days after combat units. The Central Command surgeon controlled one 250-bed contingency hospital, 15 air-transportable hospitals, 31 air-transportable clinics, and several aeromedical staging facilities in the Persian Gulf theater of operations. The European Command Surgeon controlled four contingency hospitals, three in England and one in Germany, in preparation for potential casualties that needed to be moved out of the combat theater for more extensive and definitive treatment (Lindberg, 1999).

Shortly after Iraqi troops invaded Kuwait, Navy medical personnel deployed to Saudi Arabia. Navy corpsmen accompanied Marine units in the combat zone. Three days after forces were committed to support Operation Desert Shield on the Arabian Peninsula, deployment orders went out to

the Navy hospital ships, the U.S.N. Comfort and U.S.N. Mercy. Both vessels were immediately activated, manned, and supplied. They were on station and ready in the Persian Gulf by September 23, 1990 (*United States Navy*, 1991).

After being treated by a corpsman in the field, sick or injured personnel could be rapidly moved to battalion aid stations, where a physician could assess their condition in a safer environment with ample time to accomplish a more definitive examination. The next step up the medical ladder of care was a medical battalion surgical support company or a casualty receiving and treatment ship, where patients were treated by teams of medical personnel with more sophisticated medical facilities, including pharmacy and laboratory facilities, holding wards, and more specialty surgical capability. Casualties requiring even more extensive treatment were transported to either a combat zone fleet hospital or a hospital ship. The scope of treatment available at the combat fleet hospital or hospital ship mirrored fully staffed hospitals in the United States (*United States Navy*, 1991).

Although the casualty toll on the coalition forces was light in the Persian Gulf War, the U.S. and coalition medical forces stood ready to handle a much more robust onslaught of injured troops and civilian casualties. The coalition ceased their advance and declared a cease-fire 100 hours after the ground campaign started (Schwartzkopf, 1992). The medical concept of operations in war had evolved from the Vietnam era of mostly fixed medical facility assets to a much more fluid and mobile set of small facilities tailored to follow the fighting. This concept has been carried forward into the current wars in Afghanistan and Iraq.

THE WAR IN AFGHANISTAN

In December 1979, the Soviet Union deployed occupying troops to Afghanistan. Shortly after the invasion, like thousands of Muslims throughout the world, a wealthy Saudi Arabian named Osama Bin Laden traveled to Afghanistan to join the Afghan resistance. Osama Bin Laden and his comrades viewed it as the duty of all Muslims to repel the Soviet invasion. Bin Laden helped finance and take command of about 20,000 Muslim freedom fighters from around the world. The conflict lasted almost 10 years and ended with a Soviet force withdrawal. Later, Bin Laden left Afghanistan but became increasingly militant toward the west, especially the United States (Cole, 2004; Feifer, 2009).

The United States went to war in Afghanistan because the global intelligence community determined that Osama Bin Laden, a known terrorist whose global organization was called Al Qaeda, was behind the September

11, 2001, attacks on the United States, and that he was being sheltered in Afghanistan by the Taliban. After several unsuccessful attempts to negotiate the surrender of Bin Laden to U.S. security forces, the United States launched bombing attacks on Afghanistan, specifically on the Taliban. Later, Osama Bin Laden was killed in Pakistan in a daring surprise raid ordered by U.S. President Barack Obama and carried out by a U.S. military special-forces unit on May 2, 2011.

Several coalition countries, including the United States, deployed forces to Afghanistan to engage the Taliban and Al Qaeda on the ground. In 2003, the United States began assigning military nurses and other medical personnel to formerly Russian-built hospitals in Bagram and Kandahar, Afghanistan. These personnel were housed in tents or primitive plywood structures called "B-huts." The medical mission was to support U.S. and coalition forces deployed in Afghanistan at the time. From 2003 through 2010, the number of nurses deployed to Afghanistan increased, as did the number of combat forces.

THE WAR IN IRAQ

On another front, the March 2003 invasion of Iraq was considered a continuation of the Gulf War of 1991. The 1991 Gulf War, known as Operation Desert Storm, started several months after Saddam Hussein invaded Kuwait. Hussein's forces were subsequently defeated by coalition forces, led by the United States and the United Kingdom, after short-lived combat operations. Following Hussein's defeat, the Iraqi government had agreed to surrender or destroy several types of weapons, including missiles and chemical and biological weapons caches. In early 2003, the U.S. government, led by President George W. Bush, believed that Iraq was still hiding some weapons of mass destruction. As a result, in March 2003, Operation Iraqi Freedom, with a combined force of troops from the United States, the United Kingdom, and smaller contingents from Australia and Poland, invaded Iraq and toppled the regime of Saddam Hussein, which concluded with the fall of Baghdad.

After the fall of Baghdad, the second phase of the Iraq War lasted until August 31, 2010. The second phase was marked by urban warfare in the cities, intermittent ground operations, convoys being blown up by improvised explosive devices, construction to restore Iraqi infrastructure by provisional reconstruction teams, and many military and civilian casualties. The third phase of the war began on September 1, 2010, and consisted of a drawdown and redistribution of U.S. and coalition forces into a training mode to support the Iraqi military and police forces. This third phase ended 12/31/2011 when the last U.S. troops were withdrawn from Iraq by U.S. President Barack Obama.

The first contingent of military nurses supporting the U.S. invasion of Iraq was sent to Kuwait in February 2003. When the U.S. invasion began in late March, nurses assigned to FSTs and mobile hospitals moved into Iraq and quickly set up to receive the first casualties. It was not long before an intermittent stream of the injured and dead began to ebb and flow into triage areas and a hastily set up morgue (Ruff & Roper, 2005). The U.S. military and its nurses had embarked on a long journey that would test its resolve as well as its nursing readiness for war.

CURRENT STATUS OF AFGHANISTAN AND IRAQ WARS

U.S. military nurses and nurses from multinational coalition forces served in the Iraq and Afghanistan war zones. All U.S. military personnel left Iraq by December 31, 2011. Many of these nurses are from the military services of the United Kingdom, Australia, Germany, Denmark, Poland, South Korea, and Spain, as well as the U.S. Army, Navy, and Air Force. These nurses are members of their respective military services and are providing care for their own forces as well as forces of other coalition countries, local civilians caught in the crossfire of war, and insurgents brought to their hospitals for care.

In 2009, the death toll of U.S. forces deployed to Iraq and Afghanistan surpassed 5,000. Estimates place the number of physically injured U.S. personnel at over 35,000, and no estimate of those psychologically injured is available. The number of military nurses deployed to Iraq and Afghanistan from 2003 through 2009 is not available, nor is the number of nurses injured in these wars. To date, one Army nurse has been killed in Iraq, and no U.S. military nurses have been killed in Afghanistan. Very little has been written about the U.S. military nurse experience in the Iraq and Afghanistan wars.

REFERENCES

- Adamthwaite, A. P. (1992). *The making of the second World War*. New York: Routledge.
- Alger, R. A. (1901). *The Spanish-American War*. New York: Harper & Brothers.
- Barger, J. (1991). Preparing for war: Lessons learned from U.S. Army flight nurses of World War II. *Aviation, Space, and Environmental Medicine*, 62: 772-775.
- Bigler, P. (1996). *Hostile fire: The life and death of First Lieutenant Sharon Lane*. Washington, DC: Vandamere Press.
- Bostridge, M. (2008). *Florence Nightingale: The woman and her legend*. London: Viking Press.
- Carnegie, M. (1986). *The path we tread: Blacks in nursing 1854-1984*. Philadelphia: Lippincott.

- Chickering, R. (2004). *Imperial Germany and the Great War, 1914-1918*. Cambridge, United Kingdom: Cambridge University Press.
- Clarke, A. (1951). Draft nurses: A new war and old theme, *R.N.*, 14(3), 24-25.
- Cole, S. (2004). *Ghost wars: The secret history of the CIA, Afghanistan, and Bin Laden, from the Soviet invasion to September 10, 2001*. New York: Penguin Press.
- Cook, J. L. (1988). *Dust Off: The Vietnam War*. New York: Bantam Books.
- Donahue, M. P. (1985). *Nursing, the finest art: An illustrated history*. St. Louis, MO: C.V. Mosby.
- Dossey, B. M. (2000). *Florence Nightingale: Mystic, visionary, reformer*. Philadelphia: Lippincott, Williams & Wilkins.
- Feifer, G. (2009). *The great gamble: The Soviet war in Afghanistan*. New York: Harper.
- Foot, R. (1985). *The wrong war: American policy and the dimensions of the Korean conflict, 1950-1953*. Ithaca, NY: Cornell University Press.
- Frank, M. E. (1985). *Army and Navy nurses held as prisoners of war during World War II*. Washington, DC: Department of Defense, Office of the Assistant Secretary of Defense, Manpower, Installations and Logistics.
- Freedman, D., & Rhoads, J. (Eds.). (1987). *Nurses in Vietnam: Forgotten veterans*. Austin, TX: Texas Monthly Press.
- Frye, J., & Stockton, R. (1982). Discriminant analysis of post-traumatic stress disorders among a group of Vietnam veterans. *American Journal of Psychiatry*, 139, 52-56.
- Gault, W. (1971). Some remarks on slaughter. *American Journal of Psychiatry*, 128(4), 450-451.
- Goodspeed, D. J. (1985). *The German Wars 1914-1945*. New York: Random House.
- Halberstam, D. (2007). *The coldest winter: America and the Korean War*. New York: Disney Hyperion.
- Hastings, M., & Stevens, G. (1985). *Victory in Europe*. Boston: Little, Brown, & Co.
- Hobbs, C. A. (1997). *Florence Nightingale*. New York: Prentice Hall.
- Holm, J. (1982). *Women in the military*. Novato, CA: Presidio.
- Hovis, B. (1992). *Station Hospital Saigon*. Annapolis, MD: Naval Institute Press.
- Jones, B., & Janello, A. (1987). *The wall: Images and offerings from the Vietnam Veterans Memorial*. New York: Collins.
- Kalisch, P. A., & Kalisch, B. J. (2004). *American nursing: A history* (4th ed.). Philadelphia: Lippincott, Williams & Wilkins.
- Kelly, L. Y., & Joel, L. (1995). *Dimensions of professional nursing*. New York: McGraw Hill.
- Lewy, G. (1977). *America in Vietnam*. New York: Oxford University Press.
- Lindberg, C. (1999). *The history of the U.S. Air Force Nurse Corps from 1984-1998*. Maxwell AFB, AL: The Air War College, Air University.
- Link, M. M., & Coleman, H. A. (1955). *Medical support of the Army Air Forces in World War II*. Washington, DC: Department of the Air Force, Office of the Air Force Surgeon General.
- Marshall, K. (1988). *In the combat zone: An oral history of American women in Vietnam*. Boston: Little, Brown, & Co.
- Martin, L. G. (1967). Angels in Vietnam. *Today's Health*, 8, 17-22, 60-62.

- McVicker, S. J. (1985). Invisible veterans: The women who served in Vietnam, *Journal of Psychosocial Nursing*, 23(10), 13-19.
- Norman, E. (1999). *We band of angels: The untold story of American nurses trapped on Bataan by the Japanese*. New York: Simon & Schuster.
- The Pentagon Papers: The Defense Department history of United States decision making on Vietnam*. (1971). Boston: Senator Gravel Edition.
- Ruff, C. L., & Roper, K. S. (2005). *Ruff's War: A Navy nurse on the frontline in Iraq*. Annapolis, MD: Naval Institute Press.
- Santoli, A. (1981). *Everything we had: An oral history of the Vietnam War by thirty-three soldiers who fought it*. New York: Ballantine Books.
- Santoli, A. (1985). *To bear any burden: The Vietnam war and its aftermath*. New York: E. P. Dutton.
- Sarnecky, M. T. (1999). *A history of the U.S. Army Nurse Corps*. Philadelphia: University of Pennsylvania Press.
- Sarnecky, M. T. (2010). *A contemporary history of the U.S. Army Nurse Corps*. Washington, DC: The Borden Institute.
- Scannell-Desch, E. A. (1996). The lived experience of women military nurses in Vietnam during the Vietnam war. *Image: Journal of Nursing Scholarship*, 28(2), 119-124.
- Scannell-Desch, E. A. (1999). Images and relationships forged in war: A study of women nurses who served in Vietnam. *Journal of Psychosocial Nursing*, 37(8), 32-42.
- Scannell-Desch, E. A. (2000a). Hardships and personal strategies of Vietnam War nurses. *Western Journal of Nursing Research*, 22(5), 526-545, 548-550.
- Scannell-Desch, E. A. (2000b). The culture of war: A study of women military nurses in Vietnam. *Journal of Transcultural Nursing*, 11(2), 87-95.
- Scannell-Desch, E. A. (2005) Lessons learned and advice from Vietnam War nurses. *Journal of Advanced Nursing*, 49(6), 601-607.
- Schimmenti, C., & Darmoody, M. (1986). Taking flight. *American Journal of Nursing*, 86, 1420-1423.
- Schwartz, L. S. (1987). Women and the Vietnam experience. *Journal of Nursing Scholarship*, 19, 168-175.
- Schwartzkopf, N. H. (1992). *It doesn't take a hero*. New York: Bantam Books.
- Tilghman, A. (2011, September 12). Our decade at war. *Air Force Times*, p. 3.
- United States Navy in Operation Desert Shield/Desert Storm: Summary Report from the Chief of Naval Operations*. (1991). Washington, DC: U.S. Naval Historical Center.
- Walker, K. (1985). *A piece of my heart*. New York, NY: Ballantine Books.