



GRADUATE SCHOOL
EAST TENNESSEE STATE UNIVERSITY

East Tennessee State University
Digital Commons @ East
Tennessee State University

Electronic Theses and Dissertations

Student Works

12-2021

The Impact of the United States Army Nurses Corps on the United States Army Fatality Rate in the Mediterranean and European Theater of Operations during World War II

Joshua Benjamin Groomes
East Tennessee State University

Follow this and additional works at: <https://dc.etsu.edu/etd>



Part of the [Military History Commons](#), [United States History Commons](#), and the [Women's History Commons](#)

Recommended Citation

Groomes, Joshua Benjamin, "The Impact of the United States Army Nurses Corps on the United States Army Fatality Rate in the Mediterranean and European Theater of Operations during World War II" (2021). *Electronic Theses and Dissertations*. Paper 3980. <https://dc.etsu.edu/etd/3980>

This Thesis - unrestricted is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.

The Impact of the United States Army Nurses Corps on the United States Army Fatality Rate in
the Mediterranean and European Theater of Operations during World War II

A thesis

presented to

the faculty of the Department of History

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in History

by

Joshua B. Groomes

December 2021

Dr. Stephen Fritz, Chair

Dr. William Douglas Burgess

Dr. Brian Maxson

Keywords: Military studies, World War II, Army Nurses Corps, Nurses, Women Studies

ABSTRACT

The Impact of the United States Army Nurses Corps on the United States Army Fatality Rate in

the Mediterranean and European Theater of Operations during World War II

by

Joshua B. Groomes

World War II was the most devastating war in human history in terms of loss of life. The Japanese attack on Pearl Harbor on December 7, 1941, plunged the United States into war. Less than seven thousand military nurses were on active duty at the time of the attack. By the end of the war, there were over fifty-thousand active-duty nurses. The army nurses performed under fire in field and evacuation hospitals, on hospital trains and ships, and as flight nurses on medical evacuation transport aircraft. The skill and dedication of the Army Nurses Corps insured a 95% survival rate for the wounded soldiers who received medical care in a field or evacuation hospital. Two hundred and one nurses lost their lives during World War II and sixty-seven nurses were captured and held as prisoners of war. Sixteen hundred medals, citations and commendations attest to the nurses' courage and dedication.

DEDICATION

This manuscript is dedicated to the nursing professionals, both civilian and military, who risk their lives every day to save lives. To my loving wife, Theresa, who is a family nurse practitioner and has tolerated the many weekends working on this project. I also dedicate this project to my late grandfather, Gene, and all the veterans who have defended this great nation and made this manuscript possible.

Copyright 2021 by Joshua B. Groomes

All Rights Reserved

ACKNOWLEDGEMENTS

The author wishes to express genuine gratitude to his committee members for all of their guidance and support with special thanks to Dr. Stephen Fritz for his wisdom, patience, and encouragement during the writing of this manuscript. The author is grateful to East Tennessee State University for providing the work-study scholarship so the author could achieve this grand goal of obtaining a master's degree in History. Last but not least, the author wishes to thank his classmates and his family for all their support.

TABLE OF CONTENTS

ABSTRACT	2
DEDICATION	3
ACKNOWLEDGEMENTS	5
CHAPTER 1. INTRODUCTION AND HISTORIOGRAPHY	7
CHAPTER 2. CIVILIAN NURSE TO MILITARY NURSE.....	14
CHAPTER 3. COMBAT OPERATIONS IN THE MEDITERRANEAN.....	26
CHAPTER 4. COMBAT OPERATIONS IN WESTERN EUROPE.....	40
CHAPTER 5. CONCLUSION.....	45
BIBLIOGRAPHY	46
APPENDIX: BATTLE CASUALTIES/MONTH of OCCURRENCE	49
VITA.....	53

CHAPTER 1. INTRODUCTION AND HISTORIOGRAPHY

The United States Army Nurses Corps greatly reduced the United States Army's fatality rate because of their medical training and the use of superior medical technology and evacuation procedures. The purpose of this thesis is to provide a historical review of the United States Army Nurses Corps to determine the impact on the survival rate of the United States Army combat soldier in the Mediterranean and European Theaters of Operations during the Second World War. This project will analyze the nurse's medical and military training for example such as ward management, surgery, anesthesia, and flight nurse training along with battlefield evacuation procedures to demonstrate how the direct involvement of the Army nurses as an integral part of the military had an impact on the fatality rate of the United States combat soldiers. To attain this goal, this project will evaluate both civilian nursing training and military readiness training to prepare the nurses for the hardships of combat operations and battlefield evacuation procedures. This method will be applied to research documents and secondary sources found in the National Archives and various educational institutes. The research will include historical battles as the supporting text for the overall research project of the United States Army Nurses Corps. The thesis will cover Operation Torch and the North African campaign, Operation Husky, and the liberation of Sicily. The thesis will also include battles from the Italian campaign such as Salerno and Anzio. The European campaign will cover from the battle of Normandy to the final defeat of Germany. And the thesis will also reveal how the army nurses improved medical procedures to adapt to the battlefield environment. This methodological analysis will provide a detailed account of the great importance of the services provided by the United States Army Nurses Corps.

The research project will also review how the women who joined both the nursing profession and the military faced criticism from both the military and civilian populations. During the 1920's and 1930's American public opinion was predominately unfavorable towards women of good character and standing who wanted to enter the nursing career field. The prevailing American attitude was that the nursing profession was unsuitable for young single women. Public opinion found the profession demeaning with work intensive physical labor that exposed young unmarried women to the male body which they should have no knowledge of before marriage. Besides the negative attitude towards the profession, the training consisted of a three-year course at an accredited hospital. While attending the course, the pupils were provided with room and board but worked in the hospital without pay.

The history of the United States Army Nurses Corps that served in the Second World War demands further study as their military service shattered ages old gender roles of American society. But only recently have gender historians begun to research how the Second World War and the role that women played transformed the American nation by reshaping the traditional gender norms and roles which led to sweeping civil rights movements in the second half of the 20th Century. Studies of women and gender integration of the United States military did not truly take a front seat in social or historical studies until the beginning of the 21st Century. Even then, the scholarly output has been limited. Susanne Gaskins wrote a PhD dissertation in 1994 which emphasized the limits placed on female nurses in the military, constraints that were only partly overcome through an emphasis on professionalization as a means to overcome their subordination and marginalization. Her work, though, had little immediate impact, as most successive scholarly research on women in World War II took a broader focus, with only limited

information specifically about army nurses.¹ Charissa J. Threat, with her book *Nursing Civil Rights: Gender and Race in the Army Nurse Corps*, is one of the few historians who has recently focused specifically on gender and army nurses. Although she goes beyond a specific focus on army nurses in World War II, looking as well at the Korean and Vietnam Wars, her main theme, that both African American female nurses and white male nurses experienced gender discrimination in the military, is original and thought-provoking. Male nurses were not allowed to serve in the Army Nurses Corps during World War II.²

Unfortunately, the immense life-saving role of the United States Army Nurses Corps was completely ignored after the Second World War. The nurses returned from battle torn Europe to find that only a few nurses were to be recognized for their services, but they were not allowed to receive medical or disability benefits from the government. The nurses were allowed to utilize the G.I. Bill for education but was not given any VA medical benefits. It was not until the late 1970's and early 1980's that the United States government and military began to reassess the role of women in the military.

¹ Susanne Teepe Gaskins, "G.I. Nurses at War: Gender and Professionalization in the Army Nurse Corps during World War II" (PhD diss., University of California-Riverside, 1994); Melissa Ziobro, "Skirted Soldiers: The Women's Army Corps and Gender Integration of the U.S. Army during World War II," *On Point* 17 (Spring 2012): 36-43; Agnes Gereben Schaefer, "History of Integrating Women into the U.S. Military," in idem, *Implications of Integrating Women into the Marine Corps Infantry* (Santa Monica, CA: Rand Corporation, 2015), 7-16; Melissa A. McEuen, "Women, Gender, and World War II," *Oxford Research Encyclopedias, American History* (2016), accessed 25 June 2021, doi.org/10.1093/acrefore/9780199329175.013.55; Maria Cristina Santana, "From Empowerment to Domesticity: The Case of Rosie the Riveter and the WWII Campaign," *Frontiers in Sociology* 1 (Dec 2016): 1-8, accessed 25 June 2021, doi.org/10.3389/fsoc.2016.00016.

² Charissa J. Threat, *Nursing Civil Rights: Gender and Race in the Army Nurse Corps* (Chicago: University of Illinois Press, 2015).

In 1983, thirty-eight years after the end of the Second World War, President Ronald Reagan recognized the services of the United States Army Nurses Corps and set in motion the bill to have them recognized and treated as veterans by the Veterans Administration.

This thesis is divided into four parts with the first part being the historiographical debate of whether the achievements of the United States Army Nurses Corps were enough to merit its own historical studies or be relegated as footnotes in other historical text. Army Nurses Corps veterans of World War II returning home found that the American public expected everything to return to normal. “Normal” being that women who served in the military or the home front were expected to return to their old roles as wives, mothers, and homemakers. The second chapter will cover the medical training received while attending civilian nursing schools and how the Red Cross developed a reserve pool of nurses for the military in case of war. This section will also cover how the first inductees into the Army Nurses Corps did not receive any formal military training other military customs until after the fall of Bataan and Corregidor to the Japanese. Sixty-six United States Army nurses were captured during the fall of Corregidor prompting the U.S. Army to require basic military training for the incoming nurses. After the United States Army realized that the Army Nurses Corps would be subjected to combat conditions, a formal four-week basic training course was introduced that consisted of calisthenics, cross-country marches, basic land navigation and field sanitation. The third chapter will cover the nurse’s deployment to the Mediterranean Theater of Operations. During the early military operations in Africa and Sicily the evacuation procedures were outlined in a series of trials there finalized and adopted for the European Theater of Operations. The fourth chapter will outline the nurses’ deployment to England and their further development and training in evacuation procedures to include new techniques such air evacuation utilizing flight nurses.

Historians in the past have not always recognized or acknowledged the great contributions of the United States Army Corps during the Second World War in stand-alone text but as part of another historical research project. Until recently the sacrifices and achievements of these brave women have been sidelined as supporting text in historical projects or not acknowledged at all. Historical text such as *The Ghost Front: The Ardennes Before the Battle of the Bulge* by Charles Whiting gives a casualty summary the American Army suffered on this “quiet” front before the German surprise counter-offensive.³ But the author does not give an account of the Germans shelling the Forty-fifth Field Hospital located in Elsenborn, Belgium where a United States Army Nurse, Lieutenant Francis Slinger of Boston, was killed in action. Lt. Slinger was the first nurse killed in action in the European Theater of Operations.⁴ Bob Welch powerful narrative, *American Nightingale*, reveals Lt. Slinger, a Jewish fruit peddler’s daughter who overcome daunting obstacles to serve in the Army Nurses Corps in Europe. Edith A. Aynes historical text, *From Nightingale to Eagle* published in 1973 was the first stand-alone history of the Army Nurses Corps.⁵ The book describes the author’s personal experience in the Army Nurses Corps during World War II but leaves out some details about the nurses’ initial military training.

Kathi Jackson’s book, *They Call Them Angels*, describes the individual courage and devotion of the nurses who served in hospitals, ships and planes to aid the wounded but does not give many details of the battles.⁶ Mary Elizabeth Carnegie’s text, *The Path We Tread: Blacks in*

³ Charles Whiting, *The Ghost Front: The Ardennes Before the Battle of the Bulge* (Cambridge, MA: Perseus Books Group, 2002), ix

⁴ Bob Welch, *American Nightingale: The Story of Frances Slinger, Forgotten Heroine of Normandy* (New York, NY: Atria Books, 2004), 210-213

⁵ Edith A. Aynes, *From Nightingale to Eagle* (Englewood Cliffs, NJ: Prentice-Hall, 1973), 8.

⁶ Kathi Jackson, *They Called Them Angels: American Military Nurses of World War II* (Westport, CT: Praeger Publishers, 2000), iv-ix.

Nursing, covers the 130 years of the long struggle for black nurses to gain their rightful position in the health care system. The third chapter of this book mainly describes the operations of the Cadet Nurses Corps during the Second World War.⁷ Barbara Brooks Tomblin's account of the Army Nurses Corps titled *G.I. Nightingales* explains in detail how nurses were recruited and trained by the military, their officer status compared to male officers and recounts many of the nurses' individual experiences on the battlefield.⁸ Stephen Ambrose's, *Citizen Soldiers*, has a chapter about the doctors, medics and nurses serving in the European Theater of Operations but he does not give any details about their duties and training and very little about their experiences on the battlefield.⁹

Most history books written during the late 1960's and the early 1970's give rounded averages, Allies rounded down, and Axis rounded up, for casualty rates but do not include any text on the Army Medical Services. Even Anthony Beevor's book, *D-Day*, written in 2009 does not give any account for the field hospitals or air evacuation units that supported the Normandy campaign.¹⁰ It is not until 1999 that a complete stand-alone text was published, *A History of the United States Army Nurses Corps* by Mary T. Sarnecky.¹¹

Most histories, such as the Department of the Army's General Studies of World War II, states that advancements in medicines and medical procedures prevented heavier casualties in the Second World War.¹² Both the Axis and Allied powers developed powerful new weapons of

⁷ Mary Elizabeth Carnegie, *The Path We Tread: Blacks in Nursing, 1854-1984* (Philadelphia, PA: J.B. Lippincott, 1986), x.

⁸ Barbara Brooks Tomblin, *G.I. Nightingales: The Army Nurses Corps in World War II* (Lexington, KY: University of Kentucky Press, 1996), iv-x.

⁹ Stephen Ambrose, *Citizen Soldiers: The U.S. Army from the Normandy Beaches to the Bulge to the Surrender of Germany June 7, 1944, to May 7, 1944* (New York, NY: Simon & Schuster, 1997), 107.

¹⁰ Anthony Beevor, *D-Day: The Battle for Normandy* (New York, NY: Penguin Book, 2009), 155.

¹¹ Mary T. Sarnecky, *A History of the United States Army Nurses Corps* (Philadelphia, PA: University of Pennsylvania, 1999), i-ii.

¹² Leonard D. Heaton, *Medical Supply in World War II* (Washington, D.C.: Office of the Surgeon General, Department of the Army, 1968), 203

destruction, but the United States' combat fatality rate of the Second World War was reduced to approximately half the number of American casualties suffered in the First World War. Even though the United States fought for three years and nine months in the Second World war compared to the one year and seven months of the First World War. The introduction of advanced medicine and better trained medical personnel that could evacuate and administer aid far more quickly and efficiently proved to be key lowering combat fatality rates. Another extremely important medical technique that nurses were trained for was triage. This was the process of sorting wounded soldiers by the severity of their wounds to ensure the most life-threatening cases were seen first. The British and German Armies used doctors for triage which was not feasible during combat operations as they were performing surgeries. This left the medics or litter bearers which were not trained in the triage process to sort the wounded which led to a higher fatality rate.¹³

By comparison, the German military had many of the same advances but without the dedicated nurses corps. The German Army's equivalent of a battalion hospital did not possess any personnel with level of the Army Nurses Corps' training except for the German Army battalion medical officer who had approximately two years of medical training who could perform most lifesaving care except surgery. The problem was that the German Army only had one battalion medical officer for approximately four hundred soldiers compared to sixty United States Army nurses in the same size field unit, thus limiting the impact of German medical procedures.¹⁴

¹³ Michael Wright, *The World at Arms: The Reader's Digest Illustrated History of World War II* (Pleasantville, NY: Reader's Digest Association, 1989), 308.

¹⁴ Alex Buchner, *The German Army Medical Corps in World War II* (Atglen, PA: Schiffer Publishing, Ltd., 1999), 18-19

CHAPTER 2. CIVILIAN NURSE TO MILITARY NURSE

When the United States entered the Second World War following the Japanese surprise attack on Pearl harbor on December 7, 1941, the military was woefully understaffed of nurses. There were only 6700 Army and Navy nurses combined on active duty serving both stateside and overseas. By the end of the Second World War there were 63,000 military nurses serving on active duty in every theater of operation. When the war ended, 230 nurses had lost their lives, 16 of them killed as a result of enemy action, more than 70 were prisoners-of-war held by Japan and approximately 1600 nurses had won awards to include the Distinguished Service Medal, the Silver Star, the Bronze Star and the Purple Heart. The Second World War forever changed the military nurse and the role they served.¹⁵

After Pearl Harbor a massive recruitment drive for nurses began through the combined efforts of the American Red Cross Nursing Service and the National Nursing Council for War Service. The NNCWS consisted of six nursing organizations which was under the direction of the Nursing Division Procurement and Assignment Service of the War Manpower Commission. These organizations compiled an inventory of nurses who qualified for military service and together they coordinated a massive nationwide recruitment program.¹⁶ The nationwide nursing recruitment campaign brought to the attention of the military that African American and Japanese American women wanted to serve their country. During World War II the United States Army Nurses Corps accepted only a small number of African American nurses.¹⁷

¹⁵ Jackson, *They Called Them Angels*, 2.

¹⁶ Mary T. Sarnecky, *A History of the United States Army Nurses Corps* (Philadelphia, PA: University of Pennsylvania, 1999), 270-271.

¹⁷ Carnegie, *The Path We Tread*, 5.

By the end of the Second World War only 479 African American nurses would serve out of 50,000 Army nurses because of the United States Army's segregation system. African American nurses serving in Europe were only allowed to care for German prisoners of war while in the Pacific they were allowed to care for all American military personnel. Even with this low enrollment, African American nurses would serve with honor and distinction in Africa, England, Burma and the Southwest Pacific.¹⁸ Japanese American women were not allowed to join the United States Army Nurses Corps until February 1943. The Japanese American women were not segregated into separate units because there were not enough Japanese American female volunteers.¹⁹ Millions of dollars were spent on advertising to prominently display images of military nurses in newspapers and magazines. Radio advertisements generated a massive response as several radio programs featured movie stars such as Helen Hayes who used scripts about actual Army nurses in her weekly program.²⁰

After World War I conditions in the United States were conducive for improving and or expanding the United States Army Nurses Corps. During the era known as the "Roaring Twenties" the national attitude was one of uninhibited materialism and marked isolationism with antimilitarism as the prevalent theme. During this time period the American opinion held that women of good character did not become nurses, civilian or military, because it was not morally suitable for young unmarried women.²¹ Major Edith A. Aynes, ANC., stated that her mother flatly rejected the idea of her daughter pursuing a nursing career. "Nurses were not decent, and

¹⁸ Carnegie, *The Path We Tread*, 5.

¹⁹ Brenda L. Moore, *Serving Our Country: Japanese Women in the Military during World War II* (New Brunswick, NJ: Rutgers University Press, 2003), 8.

²⁰ "Army War Show Aids Recruitment." *American Journal of Nursing* 42, no. 8 (Summer 42): 957, accessed January 12, 2021, <https://www.jstor.org/stable/3414906>.

²¹ Evelyn M. Monahan and Rosemary Neidel-Greenlee, *And If I Perish: Frontline U.S. Army Nurses in World War II* (New York, NY: Alfred A. Knopf, 2003), 10.

she would not be able to hold her head up if her daughter became a nurse to empty bedpans and do other disgusting things for people.”²²

American society was very narrow-minded regarding sexuality and young unwed women. The average American citizen believed that young women placed in that vocation would be exposed to male genitalia which would make them unfit for polite society. Also, the young women would be exposed to patients with illnesses that were considered taboo such as venereal disease. Besides the prevailing negative public attitude of the nursing career field, the training was rigorous and exhausting. Civilian hospitals provided training, room and board in exchange for free labor and long hours on the hospital wards. But in the midst of the Great Depression \$70 dollars a month sounded like a small fortune which attracted a great many females to the profession.²³ But prior to World War II recruitment for both civilian and military nursing fell short of the nation’s requirements. The greatest aid to nursing recruitment was the Bolton Bill proposed by Congresswomen Francis Payne Bolton.

The Bolton Bill allocated \$1, 250,000 dollars in 1941 and \$3,500,000 in 1942 for nursing education.²⁴ Congresswomen Bolton also sponsored the bill that created another great recruitment tool, the United States Cadet Nurses Corps. The introduction of the United States Cadet Nurses Corps helped to create major changes in nursing education as it allowed the admission of minorities, improved the curriculum and brought on better instructors. This program provided free tuition, money for books, uniforms, rent and a monthly allowance to young women who agreed to serve in military or civilian nursing for the duration of the war. The

²² Aynes, *From Nightingale to Eagle*, 6.

²³ Tomblin, *G.I. Nightingales*, 14-15.

²⁴ “The Bolton Bill,” *American Journal of Nursing*, 42, # 7 (July 1942): p. 678, accessed December 10, 2020, <https://www.jstor.org/stable/3456178>.

first senior cadets entered the military nurses training on 15 June 1944 and when the program ended in February 1946 a total of 5,627 nurses had graduated the program.²⁵

When the United States plunged into the Second World War the military did not have a standardized training regimen for the Army Nurses Corps. Nurses who joined the United States Army Nurses Corps prior to July 1943 did not receive any formal basic training with the exception of a few Army bases. After the fall of the Philippines and the campaign in North Africa the United States Army realized that the Army Nurses Corps required a basic training course to acclimate the nurses to combat conditions. In July 1943, the first mandatory basic training centers for the nurses was opened in Fort Devens, Massachusetts, Fort Sam Houston, Texas and Camp McCoy, Wisconsin. The training consisted of 144 hours of military instruction spread out over four weeks. The training consisted of military courtesy, law, dismounted drill, physical conditioning, field sanitation and ward management.²⁶

For the nurses who did not receive basic training in the United States a course was set up for them in England nicknamed the “Commando Course for Nurses” which was three weeks of 10-hour days of comprehensive combat training. Learning from experiences in North Africa the combat training would be expanded to preparing fighting positions, using camouflage, reading maps, pitching tents, defense against chemical, air, mechanized and airborne attacks. The course would also include advancing under enemy artillery fire.²⁷

The nurses’ training would also include the latest advances in medicines such as penicillin, sulfa drugs, atabrine and sodium pentothal and medical procedures in anesthesiology,

²⁵ Jackson, *They Called Them Angels*, 3.

²⁶ Jackson, *They Called Them*, 5-6.

²⁷ Monahan and Neidel-Greenlee, *And If I Perish*, 320.

neuropsychiatric illnesses, maxillofacial, neurosurgery and the proper procedures for using and storing whole blood and blood plasma.²⁸

The anesthesiology training for the nurses would prove to most valuable in constant demand throughout the Second World War. Nurses specializing in this field would free up hundreds of doctors that would normally be in charge of administering the necessary anesthesia to render a patient unconscious.²⁹ The German Army during the Second World War did not utilize anesthetists since Germany did not recognize this medical specialty until the 1950's. In forward units such as mobile first aid stations the wounded soldiers were treated with ethyl chloride, ether or chloroform. Another form of anesthetic was called S.E.E. which was a mixture of scopolamine, ephetonin and oxycodone which was administered intravenously. This mixture could easily overdose and prove fatal to the patient. In the German Army anesthetics were only administered under the supervision of surgeons in civilian and base hospitals far removed from the front.³⁰ Having a trained nursing staff with forward units would prove vital in both the Mediterranean and European Theater of Operations.

During the Second World War, the nurses of the United States Army Nurses Corps pioneered in-flight nursing for air evacuation missions. They would help to create the flight nursing program that would provide care to the sick and wounded being flown back to general hospitals in rear areas for more intensive and long-term care. The nurses would undergo rigorous training to qualify as flight nurses. The United States was not the first country to utilize air evacuation for wounded from combat zones. England and France attempted small scale air

²⁸ Matthew Roberts and S. Jagdish, "A History of Intravenous Anesthesia in War (1656-1988)," *Journal of Anesthesia History*, 2, # 1, (2016): 13-21, accessed Feb. 1, 2021, <https://pubmed.ncbi.nlm.nih.gov/26898141/>.

²⁹ Sarnecky, *A History of the United States Army Nurses Corps*, 130-131.

³⁰ Roberts and Jagdish, "History of Intravenous Anesthesia in War, 13-21.

evacuations in their Middle East and African colonies with some success in the 1920's.³¹ Neither country at that time had adopted a flight nurse program to tend to the wounded or sick evacuees.³²

Germany was the first to use air evacuation on a large scale to remove combat wounded soldiers from the battlefield during their involvement in the Spanish Civil War, 1936-1938, but they did not employ flight nurses which increased the risk of medical emergencies becoming fatal during the flight. German transport planes would bring in cargo crates and take the wounded out on the return flight but without the benefit of a flight nurse to monitor and adjust medications as needed because of the changes in altitudes.³³

The United States Army prepared Bowman Field near Louisville, Kentucky to support the United States Army Air Forces School of Air Evacuation which opened in June 1943. The Army activated the 349th and the 507th Air Evacuation Squadrons to train the first volunteers of flight nurse school. From December 1942 until October 1944, 1079, nurses completed flight nurse training at Bowman Field, Kentucky when it was moved to the newly opened School of Aviation Medicine at Randolph Field, Texas where another 435 nurses would graduate between November 1944 to June 1946.³⁴

On February 18, 1943, the first 30 flight nurses of the 349th Air Evacuation Group graduated from air evacuation at the base chapel at Bowman Field, Kentucky. This group had completed a 4-week course of training, which would later be expanded to nine weeks, that

³¹ Robert F. Futrell, *Development of Aeromedical Evacuation in the USAF: 1909-1960* (Maxwell AFB, AL: USAF Historical Division Research Studies Institute, Air University, 1960), 20.

³² Futrell, *Development of Aeromedical Evacuation in the USAF*, 20.

³³ Alfred Price, *The Luftwaffe* (New York, Ny: Ballantine Books Inc., 1973), 15.

³⁴ Sarnecky, *A History of the United States Army Nurses Corps*, 252,

included air evacuation nursing, air evacuation tactics, survival, aeromedical physiology, mental hygiene, aircraft loading procedures and crashlanding procedures.³⁵

Additionally, the flight nurses were trained to operate equipment not normally utilized by field nurses such as chemical heating pads, portable oxygen tanks, plasma administering apparatus and equipment for inflight feeding. The flight nurses were trained to deal with altitude sickness and any ill side effects of any medicines administered on the ground before takeoff. Some painkilling medication reduced respiration and heart rate which could kill a wounded soldier at higher altitudes.³⁶

The selection criteria for flight nurses consisted of a rigorous flight physical examination, be between twenty-one and thirty-six years of age, weigh between 105 to 135 pounds and a height between sixty-two and seventy-two inches tall. The applicant had to have served for six months in the United States Army Nurses Corps before applying for flight nurses' school.³⁷

The 802nd and 807th Medical Air Evacuation Transport Squadrons of the 12th Army Air Force supported Operation Torch and subsequent campaigns in North Africa. In the early phase of the Tunisian Campaign more casualties were evacuated by air than any other means of transportation. The evacuation squadrons used C-47 transport planes rigged with litter racks to hold eighteen to twenty ill or wounded soldiers. The planes carried an evacuation kits which consisted of blood plasma, oxygen, morphine, portable heaters, first-aid medicine, blankets and approximately four hundred liters of water. By establishing evacuation Hospitals near Army Airfields, the evacuation squadrons could transport the wounded soldiers directly to the General Hospitals that had been established in Oran and Algiers, Algeria. The United States Army

³⁵ Edith Cerasale, *The Story of Air Evacuation, 1942-1989* (Dallas, Texas: Taylor Publishing Company, 1989), 8.

³⁶ Cerasale, *The Story of Air Evacuation*, 8.

³⁷ *Ibid.*, 9.

suffered 8,978 wounded in combat. A total of 4,806 patients were evacuated by air to the above mentioned in cities which laid the foundation for the Army's chain of evacuation procedure.³⁸

The experience in North Africa revealed to the United States Army the immense capabilities of the air evacuation squadron that would continue to play an important role in the Italian and European campaigns. The United States Army would revise and improve their hospitalization and evacuation procedures for the Sicilian and Italian campaigns.³⁹

The Medical Air Evacuation Squadrons would continue to operate from forward air bases to quickly move the critically wounded directly to Evacuation Hospitals where the casualties would receive additional treatment where it would be decided if patient would recover there or be sent to the General Hospitals in Oran and Algiers. During the Sicilian Campaign, the United States Army hospital facilities suffered overcrowding from not only American casualties but also Allied soldiers, enemy prisoners of war and Italian civilians who did not possess any arrangements for medical care. Because of this situation air evacuation became a vital necessity to help alleviate the situation. While medical air evacuation followed the basic procedures utilized in Tunisia, it was beginning to be more organized such as a ward management system at the airfield to help sort the most critical to be flown out first and prioritizing medical air evacuation flights for take-off. During the Sicily campaign once again the flight nurses would be operating from forward bases that would be subjected to artillery and mortar fire while under constant threat of enemy fighters intercepting them while en route to Tunis or Algeria. The United States Army would suffer 6,471 wounded of which 5,967 was air evacuated back to

³⁸ Futrell, *Development of Aeromedical Evacuation in the USAF*, 22.

³⁹ Futrell, *Development of Aeromedical Evacuation in the USAF*, 23

General Hospitals in Africa. The air evacuation squadrons were proving invaluable for quickly moving wounded from the battlefield to the hospitals.⁴⁰

Operation Avalanche, the invasion of the Italian mainland, began September 9, 1943, at Salerno. During the battle of Sicily, the medical air evacuation transport squadrons had begun testing a new concept of flying outpatients at night which hindered enemy anti-aircraft fire and enemy fighter interception. This new concept was developed safely enough to become a standard practice for removing patients to the General Hospitals in Africa.⁴¹

The Army was continuing to develop the chain evacuation to rapidly move wounded soldiers from the battlefield to the type of medical facility that was required. Between the battles of Salerno and Naples a total of 33,793 patients were successfully ferried out by the air evacuation squadrons to mainland Africa.⁴²

The Battle of Anzio, or Operation Shingle, was one of the fiercest battles fought in Mediterranean Theater of Operations. During the initial attempt at breaking out from beachhead proved costly in the number of casualties. Evacuation proved to be impossible by aircraft or boat until the dissolution of the beachhead itself. The casualties had to be treated by the field hospitals located on the beaches until the Americans could capture the airfields farther inland at the town of Nettuno. Once the Army cleared and repaired the airfields the 802nd and the 807th Medical Air Evacuation Transport Squadrons became heavily involved in casualty evacuation. Between May 26, 1944, and August 31, 1944, a total of 33, 793 patients were successfully evacuated by air to the Tunis-Bizerte area. Direct air evacuation of critical care patients to the United States, the Zone of Interior, began out of Casablanca on July 3, 1944, and out of Naples on July 19, 1944.⁴³

⁴⁰ Ibid., 24.

⁴¹ David Mason, *Salerno: Foothold in Europe* (New York, NY: Ballantine Books Inc., 1972), 86.

⁴² Ibid., 86.

⁴³ Cerasale, *The Story of Air Evacuation*, 68.

Until early 1944 very few patients were being flown out of the European Theater of Operations to the Zone of Interior in the United States. After successful operations in the Mediterranean the United States Army Air Force Transport Command began expanding its medical facilities at intermediate stations along the transatlantic routes. The Ninth Air Force in Europe was directed to equip all of their transport planes with suitable litter racks and began stockpiling the necessary medical supplies needed on medical flights.⁴⁴

Most the patients that were to be transferred from General Hospitals to the United States would be moved to the medical facilities of the Transatlantic Military Air Terminal at Prestwick, Scotland in preparation for their flight to the states.⁴⁵

At the beginning of the invasion of Europe, air evacuation would only supplement evacuation performed by road, rail, and sea depending on the tactical situation, air superiority, and the weather. During the initial D-Day invasion of Normandy the casualties had to be removed completely by boat which at times proved almost impossible due to enemy small-arms and artillery fire. Air evacuations from the continent of Europe began on June 10, 1944, and the patient volume would grow rapidly as the United States Army encountered stiff resistance in the Normandy hedgerows. Between June 10, 1944, and July 31, 1944, 25,959 American wounded from Normandy were evacuated, which accounted for almost 33% of all Army casualties. The Army Air Forces would open additional receiving airfields and continue to upgrade the logistical efficiency for air evacuation.⁴⁶

⁴⁴ Cerasale, *The Story of Air Evacuation, 1942-1989*, 70.

⁴⁵ Mae Mills Links and Hubert A. Coleman, *Medical Support of the Army Air Forces in World War II* (Washington, D.C.: Office of the Surgeon General, USAF, 1955), 112.

⁴⁶ Cerasale, *The Story of Air Evacuation*, 71-72.

With this expansion the Medical Air Evacuation Transport Squadron had the capacity to air evacuate 6,000 casualties per day. But the stubborn German resistance would create a backlog of 7,000 casualties stranded on the continent.⁴⁷

To help relieve the backlog of casualties the Army Air Forces created the 320th Transport Squadron equipped with single engine UC-64 aircraft dedicated to medical missions bringing in blood and critical medical supplies. The aircraft was equipped with three litters to evacuate patients to England. The 320th evacuated 1,168 patients, transported 30,000 pints of blood and about 460 tons of medical supplies between September 23, 1944, and December 29, 1944.⁴⁸

On March 22, 1945, 1st Lieutenant Suella V. Bernard, who of the first two nurses to fly into Normandy, became the only the nurse during the Second World War to participate in a glider combat mission. Two CG-4A landed in a clearing near the Remagen bridgehead to evacuate twenty-five severely injured American soldiers. The gliders were loaded with wounded, and the drag lines were hoisted across two poles so that a C-47 transport plane to utilize a tail hook to snatch the glider off the ground. 1st Lieutenant Suella V. Bernard tended to the patients in one of the gliders en route to a military hospital in France. She was awarded the Air Medal for this mission.⁴⁹

The flight nurses of the Medical Air Evacuation Transport Squadrons would care for approximately 175,788 patients that was evacuated by air in the Mediterranean and European Theater of Operations.⁵⁰

⁴⁷ Stephen Ambrose, *Citizen Soldiers: The U.S. Army from the Normandy Beaches to the Bulge to the Surrender of Germany June 7, 1944, to May 7, 1944* (New York, NY: Simon & Schuster, 1997), 107.

⁴⁸ Heaton, *Medical Supply in World War II*, 301.

⁴⁹ Jeffrey J. Clarke and Robert Ross Smith, *The European Theater of Operations: Riviera to the Rhine* (Washington, D.C.: U.S. Army Center of Military History, 1993), 535

⁵⁰ Valerie Moolman, *Women Aloft* (Chicago, IL: Time-Life Books, 1981), 138.

The English Royal Air Force was the only other country to have flight nurses for their air evacuation aircraft. The flight nurses proved an invaluable and positive impact on the United States Army's casualty rate in both of these theaters of operations.⁵¹

⁵¹ Moolman, *Women Aloft*, 138.

CHAPTER 3. COMBAT OPERATIONS IN THE MEDITERRANEAN

The Allies ground offensive against the Axis opened in the Mediterranean with Operation Torch, the invasion of North Africa. The United States Army Nurses Corps would make significant contributions in North Africa, the Middle East and Persia beginning in late 1942. The 38th General Hospital, which was formed at Jefferson Medical College in Philadelphia, arrived in Cairo, Egypt after a forty-day voyage. The hospital had traveled 16, 700 miles to set up a general hospital outside of Cairo, Egypt. Much of the hospital's equipment was delayed so the British casualties were washed and fed out of ration cans and the nurses improvised bed trays out packing cases. The hospital received its first patient from the Battle of El Alamein on November 11, 1942. Not only did the 38th General Hospital treat casualties from the Battle of El Alamein but also casualties from the 9th Army Air Force raids on Ploesti oil fields in Romania. The 38th General Hospital would continue to support the British Army and the 9th Army Air Force until the fighting moved further up the Italian peninsula. By 1944 the hospital had moved to Casablanca to prepare casualties to be moved to the United States.⁵²

On November 8, 1942, the Allied invasion of North Africa began. It was the largest amphibious invasion force to date, consisted of 107,450 men transported on 111 ships. The 48th Surgical Hospital, which fifty-seven nurses had been assigned, was landing with the invasion forces. The nurses were unarmed and without combat training climbed down the rope ladders to the landing crafts which took them to the North African beaches.⁵³ This was the only time in the

⁵² *Jefferson Nurses Answer Call to Arms in World War II*, pp.46 (2009). A Commitment to Excellence (TJU nursing school history) (1982). Paper 8. <https://jdc.jefferson.edu/shear/8>.

⁵³ Michael Wright, *The World at Arms: The Reader's Digest Illustrated History of World War II* (Pleasantville, NY: Reader's Digest Association, 1989), 231.

Second World War that army nurses would land with an invasion force. Operation Torch was the first major Anglo-American operation of the war to occupy Vichy held French North Africa.⁵⁴

The 48th Surgical Hospital came ashore with the Center Task Force on the beaches to east and west of Oran, Algeria. The Center Task Force was met with blistering fire from the shore batteries which sank the HMS Walney and caused the HMS Hartland to explode. The nurses waded ashore amidst heavy machine-gun and artillery fire which forced them to take cover behind sand dunes until the nurses were able to take cover in a dilapidated beach shack. The nurses were divided up as some of them took over a French hospital and the others were converted a set of old barracks to a hospital. The 48th Surgical Hospital went into action without their equipment which was still on the ships or had been lost on the way into the beaches. In the first forty-eight hours ashore, the 48th Surgical Hospital, with little food and water, using improvised and borrowed equipment treated 480 casualties. The nurses' training in triage and ward management would prove very effective in sorting the casualties by medical necessity. The United States Medical Services and the Allied Command realized that landing the field and surgical hospitals in the first assault wave did not prove effective in treating and evacuating the wounded to safety. It also put the medical teams into the path of danger that make them casualties also which could help to produce a failed invasion. The two commands researched how and where the chain of evacuation did not function properly. In the case of Operation Torch the chain of evacuation almost failed across the board as the medical teams were under fire for several days. The United States Army suffered 526 soldiers killed in action and 352 wounded.⁵⁵ Of the 526 killed in action, 105 of them died at the aid stations or hospitals from their injuries.

⁵⁴ Tomblin, *G.I. Nightingale*, 71.

⁵⁵ Wright, *The World at Arm*, 238.

Despite the failings, during Operation Torch a wounded soldier still had an approximate 80% survival rate if they made it to an aid station or hospital.⁵⁶

As a result of after-action evaluation, new practices were implemented for future amphibious assaults, such as having first aid and clearing stations set up and operated by Navy corpsman until the beachhead was cleared and the Army hospitals could be brought ashore in relative safety. But Operation Torch also revealed the versatility and flexibility of the Army Nurses Corps to react and adapt to unfamiliar situations and still be able to treat and care for the wounded.⁵⁷

North Africa would prove to be a proving ground for nurses and doctors transitioning from civilian practice to the brutal practice of battlefield medicine. In North Africa and the Mediterranean theater, the evacuation protocol was formulated and put in place for echelons of patient care which included sites for complete treatment set within parameters to return the soldier to combat. This was the beginning for the outline and installation of the chain of evacuation protocol. Medics were the first caregivers to administer first aid to the wounded soldier if more treatment was needed then the soldier was transported to a first aid station and if necessary, a collecting or clearing station. The first aid stations were in a mile of the frontlines and the collecting or clearing stations were within three to five miles to the front. If a lengthier treatment was required, then the wounded soldier would be sent to a field hospital which if necessary, might be augmented by an auxiliary surgical group. A field hospital was usually set up fifteen to thirty miles from the front lines.⁵⁸ If the wounds proved more complex, then the soldier would be transported to the rear to a general hospital. If there is no hope of the casualty of

⁵⁶ Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII: Final Report, 7 Dec. 1941-31 Dec. 1946* (Washington D.C.: Department of Army, 1962), 62.

⁵⁷ Sarnecky, *A History of the United States Army Nurses Corps*, 218.

⁵⁸ *Ibid.*, 219-220.

returning to duty then the patient would be evacuated to the Zone of Interior, the continental United States.⁵⁹

The Battle of Kasserine Pass would prove to be a terrifying and brutal test for the United States Army and its medical services. The 48th Surgical Hospital had moved from Oran to outside Constantine, Tunisia over a period of two days, then they moved further east, and closer to the front lines, near Tebessa, Algeria, a small town on the Tunisian border.⁶⁰ But on February 15, 1943, the hospital was forced to load its patients and equipment and quickly retreat to Bou Chebka in the face of the German counteroffensive at Sidi Bou Zid.

In Western Tunisia, the Allies had formed a defensive front along the Eastern Dorsal mountain range which extends from north to south almost 200 miles beginning at Pont du Fahs and ends at Gafsa. The mountain range is split by several narrow passes. The British V Corps was stationed in the northern sector, the French XIX Corps held the center, and the U.S. II Corps was in the south. On February 14, 1943, the American sector came under arial attack by German dive bombers flattening the village of Sidi Bou Zid located at the western end of Faid Pass.⁶¹

The German 10th Panzer Division passed through Faid Pass under the cover of a sandstorm to defeat Combat Command A of the U.S. 1st Armored Division who suffered heavy losses.⁶² To complete the loss, the 21st Panzer Division broke through from the south encircling 2500 American soldiers in hills outside of Sidi Bou Zid.⁶³ At the time of the German counteroffensive the U.S. 48th Surgical Hospital had moved again to Feriana, Tunisia which is approximately 21 miles from the small town of Kasserine, Tunisia. The American units were in

⁵⁹ Sarnecky, *A History of the United States Army Nurses Corps*, 220

⁶⁰ Tomblin, *G.I. Nightingale*, 73.

⁶¹ Charles Whiting, *First Blood: Battle of Kasserine Pass, 1943* (Kent, UK: Bookzart Publishing, 2014), 12.

⁶² Whiting, *First Blood: Battle of Kasserine Pass, 1943*, 14.

⁶³ Wright, *The World at Arms*, 234.

full retreat when the 48th Surgical Hospital received the word to send their patients to 9th Evacuation Hospital forty miles to the rear, then pack up and move to the west of Tebessa, Tunisia. The United States Army was still gaining experience in combat, and it showed. The orders for the hospital came late and some of the patients could not be moved, so they were going to be left with corpsmen who volunteered to stay even though it meant they were going to be captured. Weather conditions made air evacuation impossible so the 48th Surgical Hospital had to rely on ambulances and buses from the British 6th Motor Ambulance Company to evacuate 180 patients in the wake of the German breakthrough at Kasserine Pass.⁶⁴ The 48th Surgical Hospital successfully retreated to Tebessa only to retreat again, moving to the small town of Youk-les-Bans before it could begin receiving wounded soldiers. Within an hour the 48th Surgical Hospital treated 600 patients, which was three times more than their capacity.⁶⁵

The United States Army suffered 300 killed in action, 3,000 wounded and 4,026 prisoners of war. Of the 300 killed in action, 60 soldiers would die of their wounds after reaching either an aid station or field hospital. The chance for survival was 80% and, in this case, medical corpsmen found it difficult to deliver the to the hospitals because of the chaotic nature of retreating.⁶⁶ It proved an almost impossible task delivering patients when the ambulance drivers could not find the hospitals because they had been forced to evacuate the area quickly and several hospital units became lost.⁶⁷

The United States Army Medical Services began to look at the painful lessons the German counteroffensive had given them. The forward hospital units needed more advance

⁶⁴ Ward Rutherford, *Kasserine Pass: Baptism of Fire* (New York, NY: Ballantine Books, 1970), 11.

⁶⁵ Jackson, *They Called Them Angel*, 54-55.

⁶⁶ Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII: Final Report, 7 Dec. 1941-31 Dec. 1946* (Washington D.C.: Department of Army, 1962), 62-63.

⁶⁷ Rutherford, *Kasserine Pass: Baptism of Fire*, 18.

warning of an impending movement, especially retreat, and more initiative was needed from the surgeon in charge to prepare the hospital for movement due to increased enemy activity and have a collection point or hospital towards the rear area to move the patients.

During the North African campaign, the United States Army Medical Services would treat and care for over 15,000 sick wounded soldiers. Because the medical units from the frontlines to rear echelons had nurses integrated into these units the sick and wounded had a better chance of survival. During the five months the nurses had been in North Africa they had overcome and adapt to several situations that faced them. One of these obstacles was that the War Department had not supplied enough standard equipment such as the stands used to support intravenous bottles. The nurses had to improvise a method to hang hundreds of intravenous bottles now in use. The nurses sank four extra tent poles at the head of the cots with wire suspended between them to hold the intravenous bottles. In Tunisia there was not a blood bank for whole blood so the nurses would scrounge and sterilize every bottle they could find to use for blood donations. The system was primitive but effective as one end of the rubber tube was attached to a needle that was inserted into the donor's vein and the other end into a sterilized bottle on the floor. The apparatus worked off of gravity.⁶⁸

If a wounded soldier could reach a battalion first aid station within first hour being hit, he stood a seventy per cent of survival. This survival rate would go up as the war progressed. This task would be achieved while having to relocate numerous times and coming enemy fire.⁶⁹

The next stop for the United States Army Nurses Corps would be the island of Sicily, during Operation Husky. On July 10, 1943, the Allied began their invasion of Sicily with 2500 ships carrying 181,000 soldiers of the United States Seventh Army and the British Eighth Army.

⁶⁸ Jackson, *They Called Them Angels*, 55.

⁶⁹ Monahan and Neidel-Greenlee, *And If I Perish*, 97.

The plan was secure the shipping lanes from the England and the United States to the Middle East and the Soviet Union. It was also hoped that it would cause Italy to sue for peace.⁷⁰

The amphibious assaults stretched from Syracuse to Licata on the south side of the island with paratroopers landing at designated location further inland. The ground forces had survived the landing, considered the most dangerous period, and within two days had secured a third of the island. The medical plans for Operation Husky were to send in attached medical units with supplies of blood plasma, morphine syrettes, and extra dressings on D-Day followed by one 400-bed evacuation hospital per division. The casualties would be evacuated by landing craft and aircraft to hospital ships or directly to North Africa. The first American hospital unit to set up operations in Sicily was the 11th Evacuation Hospital at Licata on July 15, 1943. Within two hours of landing the hospital began caring for its first patients. The 11th Evacuation Hospital would treat 900 wounded soldiers over the next three days. During the campaign, the hospital would show their skills honed during the Tunisian campaign. The 15th Evacuation Hospital landed at Gela and moved north to a field outside Caltanissetta. Their advance party had already staked the exact location of each tent and had preassigned areas for the trucks and generators.⁷¹ Within three hours of the unit's arrival the hospital was set up and ready to receive patients. The unit recorded more soldiers infected diseases than combat wounded. The hospital treated 583 disease cases with only 154 wounded soldiers.⁷²

The rapid advance of the American troops required the maximum mobility from the Army hospital units and each division had to have a clearing station with at least one field hospital and a 400-bed evacuation hospital within ambulance distance. Movement across the

⁷⁰ Martin Blumenson, *Sicily: Whose victory?* (New York, NY: Ballantine Books, 1969), 4.

⁷¹ Blumenson, *Sicily*, 5-6.

⁷² Charles M. Wiltse, *The Medical Department: Medical Service in the Mediterranean and Minor Theaters* (Washington, D.C.: Department of the Army, 1965), 165.

Sicilian terrain consisted of steep mountain sides with treacherous trails and turns. As the hospital personnel passed through small towns the inhabitants seemed scared of the doctors and nurses until they saw the Red Cross armbands. The Sicilians were amazed at the sight of women dressed as men. The Sicilian countryside posed an issue with limited hospital sites, limited shipping space, and an everchanging front lines that caused overcrowding in the hospitals. But the Army medical services managed, despite the obstacles, admitted a total of 20,734 American patients, 338 Allied soldiers and 1, 583 civilians. Of those admitted, 13, 320 were sick, 5,016 were battle casualties and 2, 308 were noncombat injuries.⁷³

During the Sicilian campaign, the Army Medical Services made improvements of the chain of evacuation by better staging of equipment and hospitals to support each other. Improved airfield repair and construction allowed the Medical Air Evacuation Transport Squadrons quicker access to the wounded. The Army nurses had proven in two consecutive campaigns that could withstand the rigors of battle and provide outstanding medical care.⁷⁴

An incident within the 93rd Evacuation Hospital almost cost General Patton his military career. During a visit to the hospital, he came across an unwounded soldier that stated his nerves could not take the rigors of combat anymore. Patton slapped the soldier and threatened to have him shot for cowardice. The incident caused Patton to lose command of the 7th Army.⁷⁵

During the Tunisian and Sicily campaigns the United States Army Medical Corps corrected several shortcomings and improved the scope of the chain of evacuation. The tactic of sending in major medical units with initial amphibious landings was abandoned. During Operation Torch the medical personnel landed in the first wave but their equipment was

⁷³ Tomblin, *G.I. Nightingales*, 88-89.

⁷⁴ Sarnecky, *A History of the United States Army Nurses Corps*, 222-223.

⁷⁵ Charles Whiting, *Patton* (New York, NY: Ballantine Books, 1970), 66.

sidelined as combat equipment was given priority to be brought ashore. The nurses landed in the first wave but without any combat training proved to be a hindrance until the beachhead was cleared and they set up their hospital in abandoned buildings. But they were still too close and came under small arms fire. The nurses were able to set up wards to diagnose and treat the wounded. They prepared the worst cases for surgery but trying to evacuate them to the hospital ships proved to be a herculean task. Historians will note that the killed in action and wounded in action ratio was almost even during Operation Torch.⁷⁶

As the Army Medical Services continued to support the II Corps in the Tunisian campaign the survival rate for the wounded combat soldier elevated dramatically as the supply situation improved and the nurses become experienced to field conditions. The survival rate of the wounded combat soldiers drops momentarily during the Battle of Kasserine Pass as both the United States Army and the Medical Corps had to again learn very painful lessons of warfare.⁷⁷

Medical Services were disrupted as warning orders pertaining to retreat had not been issued in advance for the field hospitals. The abrupt and disorganized retreat of hospitals caused the seriously wounded cases to be left behind with corpsmen who volunteered to be captured with them. Also, there several incidents of medical personnel becoming separated and lost from units causing delays in reopening the hospitals.⁷⁸

The Sicilian Campaign proved to be much more organized which increased the survival rate of the wounded combat soldier. The United States Army Medical Corps and Army Supreme Headquarters Allied Expeditionary Force outlined the duties and the training for the medical advance parties prior to Operation Husky, the invasion of Sicily. The chain of evacuation had

⁷⁶ Wiltse, *Medical Service in the Mediterranean and Minor Theaters*, 168.

⁷⁷ *Ibid.*, 165-166.

⁷⁸ Rutherford, *Kasserine Pass: Baptism of Fire*, 77.

been updated to keep a continuous and expedient flow of casualty evacuation traffic without interfering with the supply traffic. The invasion of Sicily was the first use of Navy aid stations set up on the beaches during the initial landings. The Navy aid stations cooperated with the Army aid and collection stations in treating and evacuating wounded until the field and evacuation hospitals could be brought ashore. To keep up with the fast pace that General Patton's Seventh Army was setting the five United States Army Hospitals, the 11th, 15th, and the 93rd Evacuation along with the 10th and 11th Field Hospitals began a sequence of jumps across each other to cover the rapid advance. Even with the leapfrog style advance the hospitals were tending to an average of 100 new casualties a day. The Sicilian Campaign proved to be a success because of the nurses' ability to diagnose quickly and thoroughly the 22,655 patients that was admitted. The nurses prepared and evacuated a total of 11,358 wounded and sick patients, 5,391 to hospital ships and 5,967 by air.⁷⁹

When comparing the casualty count between the U.S. Seventh Army and the British Eighth Army, the U.S. would suffer 2,811 killed in action of which 225 died while at an aid station or field hospital. The British would suffer 2,721 killed in action with 408 soldiers dying after reaching a British medical facility, which was almost double the U.S. loss rate. The British did not employ nurses at frontline medical units.⁸⁰

After the successful campaign in Sicily the Allied commanders debated on where to strike next. It was decided that it would be most expedient to invade Italy. Churchill had stated that Italy was the soft underbelly of the Axis, and an Italian Campaign would draw German

⁷⁹ Wiltse, *Medical Service in the Mediterranean and Minor Theaters*, 170-171.

⁸⁰ David Fraser, *And We Shall Shock Them: The British Army in the Second World War* (London, UK: Cassell Military Publishers, 1999), 58.

troops from the Eastern Front, to aid Stalin, while still maintaining low casualty rates. The forthcoming battles would prove this strategy a very costly endeavor.

The invasion of Italy at Salerno began on September 9, 1943, without airstrikes or naval bombardment to achieve surprise. The Germans were ready for the U.S. VI Corps and met the invaders with well-aimed artillery and small-arms fire. As the Americans struggled ashore, incurring heavy casualties, the Germans counterattacked with armor that almost forced General Clark to evacuate the beaches. The Naval Aid Stations were overrun with wounded as it was almost impossible to bring landing craft to evacuate the wounded. The Army, with assistance from Navy battleships and cruisers, managed to hold the Germans. The Luftwaffe bombed the Allied fleet, sinking four transport ships, seven landing craft and damaging several more. At this time, the German Air Force introduced a new advanced remote-controlled ant-ship weapon called a glide bomb. A glide bomb struck the hospital ship HMHS Newfoundland and sank it. Most of the ship's crew and several British Army nurses, who served on board, lost their lives.⁸¹

Several U.S. Army nurses were wounded, and the full complement of nurses assigned to the 95th Evacuation Hospital, part of 2nd Auxiliary Surgical Group and the 16th Field Hospital had to evacuated back to Tunisia. This attack would delay the nurses landing in Salerno as the nurses would not return to their units until September 24, 1943. The medical personnel of Navy corpsmen and Army surgeons managed to evacuate 678 wounded soldiers to transports offshore on D-Day and D-day plus one, but the situation was deteriorating quickly as the wounded numbers mounted.⁸²

The nurses for the three different hospitals arrived on September 24, 1943, and began organizing the wounded and the different wards to relieve the teams of overstressed and tired

⁸¹ David Mason, *Salerno: Foothold in Europe* (New York, NY: Ballantine Books, 1972), 11.

⁸² Tomblin, *G.I. Nightingales*, 96.

corpsmen and doctors that been taking care of the patients from the preoperative ward through surgery to the postoperative ward. The nurses of the 95th Evacuation Hospital set a record of helping 2,433 patients. The U.S. Army would suffer 788 killed in action; eighty-eight of them died from their wounds after reaching an aid station before the nurses arrived at the hospitals. After the nurses took over the wards only seven combat wounded succumbed to their wounds. The Army Medical Corps had been developing the chain of evacuation doctrine to train the medical staff, from medic to surgeon, on quickly removing and stabilizing the wounded so they could be transported by landing craft, ambulance or aircraft to general hospitals for more extensive care. The doctrine failed when it was missing a vital link which during the initial stage of a seaborne invasion was the nurses. The survival rate of the combat wounded rose from 73% to 88% after the arrival of the nurses.⁸³

The amphibious assault at Anzio, an effort to make an end run around German defenses and break the stalemate in the Italian campaign, was one of the toughest battles faced by the Army Nurses Corps. The original intention was for the invading forces to push inland as rapidly as possible. Instead, though, any momentum achieved by the surprise landing dissipated almost immediately as the American commander, fearful of a German counterattack, allowed his forces to dither on the beaches. The result was a shallow beachhead dominated by German artillery, a battlefield that did not have a rear area to safely move the wounded to or shield the medical staff from enemy fire. The beachhead became famously known as “Hell’s Half-Acre” by the personnel who fought there. Operation Shingle intended to land 110,000 soldiers from the British 1st Infantry Division and the U.S. 3rd Division at the seacoast towns of Anzio and Nettuno.

⁸³ Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII*, 62-63.

Medical plans were based on an expected casualty rate of 10% of the assault troops and 5% of the following waves of soldiers.⁸⁴

The medical support would consist of the 33rd Field Hospital and the 93rd and 95th Evacuation Hospitals. These medical units would come ashore at H-Hour plus six on D-Day along with the Naval aid stations on the beaches to help clear the wounded. The invasion forces landed at Anzio on January 22, 1944, unopposed by the Germans. The U.S. 3rd Division quickly moved in and captured the town of Anzio. The Germans had been caught by surprise but quickly recovered bringing the town of Anzio and the beaches under heavy artillery fire and air bombardment. These attacks would prove deadly for the medical personnel as the beachhead was a narrow strip of land about fifteen miles long and seven miles deep. Sandbag walls had to be built around the hospital tents to protect the medical personnel and the wounded from shrapnel and near misses. The 95th Evacuation Hospital was the first medical unit suffer losses from the U.S. Army Nurses Corps. On February 7, 1944, a German twin engine bomber was being pursued by a British Spitfire fighter across the beachhead. The German jettisoned his bombload to gain speed and altitude. The five anti-personnel bombs fell on the 95th Evacuation Hospital sending steel fragments ripping through several tents.⁸⁵

2nd Lieutenants Blanche F. Sigman and Marjorie Morrow and 1st Lieutenant Carrie T. Sheetz were killed at their duty posts while attending to the wounded. The 95th Evacuation Hospital had been crippled with twenty-nine tents destroyed along with most of its equipment. Three nurses, two medical officers, a Red Cross worker, fourteen enlisted men and six patients had been killed along with sixty-four personnel wounded. The 95th traded places with the 15th Evacuation Hospital on the Cassino front to recover and rebuild. The day that 15th arrived and

⁸⁴ Wiltse, *Medical Service in the Mediterranean and Minor Theaters*, 175.

⁸⁵ Monahan and Neidel-Greenlee, *And If I Perish*, 124.

took over for the 95th, the 33rd Field Hospital was hit by artillery and the Chief Nurse Lt. Gertrude Spelhaug and 2nd Lt. LaVerne Farquar were killed instantly when an artillery shell struck their tent.⁸⁶

The Battle of Anzio would last until June 5, 1944 when the U.S. 3rd Infantry Division led the breakout from the beachhead and drove towards the Italian capital of Rome. The United States Army would suffer 7,000 killed in action and 36,000 wounded, 910 soldiers would die after reaching an aid station or hospital. The survival rate in Anzio was 87% when the wounded soldier reached a medical facility. The survival rate would go up as much as 94% as the beachhead was enlarged and medical facilities were out of enemy artillery range.⁸⁷

After the liberation of Rome on June 5, 1944, the U.S. Fifth Army still struggled to break through the last major German fortification aptly named the Gothic Line. The Germans had fortified the Apennine Mountain range with concrete bunkers, artillery positions and machine gun nests. The Fifth Army would suffer high casualties from July 1944 until October 1944 during their main assault on the Gothic Line.⁸⁸ Total casualties would be 6,853 killed in action and 30,522 wounded in action. Of these soldiers wounded in combat only 661 would succumb to their wounds after reaching a field hospital. Over twenty thousand soldiers would return to front-line duty which was the equivalent to an infantry division being brought on the front line.⁸⁹ The Army Nurses Corps would achieve a 75 per cent survival rate during the assault on the Gothic line. This survival rate would climb to over 95 per cent by the end of the Italian Campaign on May 2, 1945.⁹⁰

⁸⁶ Monahan and Neidel-Greenlee, *And If I Perish*, 124-125.

⁸⁷ Wiltse, *Medical Service in the Mediterranean and Minor Theaters*, 176.

⁸⁸ Wright, *The World at Arms*, 417-418.

⁸⁹ Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII*, 62-63.

⁹⁰ Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII*, 62-63.

CHAPTER 4. COMBAT OPERATIONS IN WESTERN EUROPE

The Battle for Normandy was the next important step in defeating Nazi Germany and liberating Europe. On June 6, 1944, the greatest seaborne invasion of that time launched 150,000 soldiers at the fabled Atlantic Wall as they stormed ashore on the five famous beaches known as Sword, Juno, Gold, Omaha, and Utah. From D-Day until the August 21, 1944, the Allies would land 2,052,299 men in Northern France. The Allies would suffer 240,016 casualties of which 54,211 were killed in action. Because of the lessons learned in Operation Torch there was not any field or evacuation hospitals going ashore with the landing troops. The assault on Omaha Beach would prove to be the deadliest of the five beaches. Only five miles wide and ringed by bluffs that would block the advance of Allied vehicles was defended by German fortifications that would prove most effective. The 116th Infantry Company sustained 105 casualties on the beach before they ever reached the bluffs. Of the 70,000 U.S. troops landed on D-Day, 5,000 of them would be killed or wounded in the first twenty fours. The 42nd and 45th Field Hospitals landed on June 8, 1944, without their nurses and faced the same problems as the hospitals did at the beaches of Salerno. The chain of evacuation of broke down and wounded could not be moved to the transports.⁹¹

The first nurses, Lieutenants Atkins, Brittingham, Cameron, Farabough, Molony and Stanfill, to land at Utah Beach on June 10, 1944, was from the 128th Evacuation Hospital. They were sent to the 42nd Field Hospital while they waited for their hospital equipment to offloaded and set up.⁹² They immediately went work on the wounded that lying on stretchers in the field awaiting surgery. The nurses would again prove invaluable in caring for the wounded which

⁹¹ Beevor, *D-Day*, 24-25.

⁹² Ambrose, *Citizen Soldiers*, 24.

would prove a herculean task. During the month of June, a total of 27,392 casualties would be evacuated from Normandy to hospitals in England. The casualty total for the Battle of Normandy would 38,211 killed in action with 6,247 soldiers who died from their wounds after reaching a medical facility. There were 118,895 wounded in action with 23,515 soldiers that was evacuated to United States for further treatment. Only 14% of the U.S. servicemen sent abroad during the Second World War were infantrymen, yet they suffered more than 70% of the casualties. In Normandy, the infantry suffered 85% of the casualties.⁹³ Once the nurses went ashore the survival rate went from approximately 80% to approximately 93% survival rate. By the end of the war the survival rate would hold steady at approximately 95% except during the Battle of Hurtgen and the German surprise counterattack which known as the Battle of the Bulge.⁹⁴

The Battle of Hurtgen Forest would be the first exception to the United States Army's almost perfect casualty survival rate in the final drive to Germany. The 102nd, 107th and the 110th Evacuation Hospitals had been assigned to the First Army during its assault on the forest. The battle began in the city of Aachen which was the first German city to be captured on October 21, 1944, by the U.S. First Army commanded by Lt. General Hodges. The U.S. First Army continued its advance through the Stolberg Corridor with the industrialized Ruhr Valley to the north and the nightmarish Hurtgen Forest to the south. One American soldier described Hurtgen Forest as a witches' lair.⁹⁵

The forest covered thirty-one square miles which was heavily defended by the German Army with mines, trenches and fortified gun emplacements. Between September and December 1944, eleven infantry divisions, two armored divisions and two Ranger battalions tried in vain to

⁹³ L.F. Ellis, *Victory in the West: The Battle of Normandy* (East Sussex, UK: Naval and Military Press Ltd., 1962), 254.

⁹⁴ Beevor, *D-Day*, 132.

⁹⁵ Jeffery J. Clark and Robert Rose Smith, *The European Theater of Operations: Riviera to the Rhine* (Washington, D.C.: U.S. Army Center of Military History, 1993), 212.

wrest control of the heavily defended forest from the Germans. The 9th Infantry Division began its advance into the forest on September 14, 1944, and when it was relieved by the 28th Infantry Division on the October 16, 1944, it had managed only to advance 3,000 yards at the cost of 4,500 casualties. The terrain prohibited the use of the ¾-ton ambulances and the ¼-ton litter carrying trucks placing the burden of evacuating the wounded on the litter bearers. There was a shortage of litter bearers that had to be temporarily filled by infantry replacements and rear area personnel. November 18, 1944, saw in a single day the most violent combat of the campaign with 1,879 casualties being admitted to evacuation hospitals. The Battle of Hurtgen Forest was a German defensive victory that cost the U.S. Army 33,000 casualties including 9,000 non-combat losses. Because of the difficulties of trying to evacuate the wounded through the heavily wooded area the fatality rate rose from an average 5% to almost 18% despite the heroic efforts of the surgeons and nurses at the evacuation hospitals.⁹⁶

On December 16, 1944, over 250,000 German troops armed 1,000 tanks and 1900 field artillery pieces attacked the weakly defended Ardennes sector of the U.S. First Army. Hitler had hoped to cross the Meuse River and capture Liege and Antwerp. The Germans managed to drive a wedge that was 60 miles deep and 50 miles wide into the sector of the U.S. First Army but fell short of its objectives. This counteroffensive would cost the Germans over 100,000 men and large amounts of irreplaceable equipment and the ability to ever mount another offensive.⁹⁷

The Battle of the Bulge created many challenges for the medical units such as the new experiences of conducting retreats under enemy fire and in some cases the frightening event of being captured and interned as a prisoner of war. During the first two weeks the medical units that had not been overrun were able to redeploy while maintaining continuous medical support of

⁹⁶ Charles B. Macdonald, *The Battle of Hurtgen Forest* (Philadelphia, PA: University of Pennsylvania, 2002), 178.

⁹⁷ John S.D. Eisenhower, *The Bitter Woods: The Battle of the Bulge* (Boston, MA: Da Capo Press, 1995), 233.

the regrouping combat forces. Unfortunately, the continuous retreat caused the medical units to lose their ability to hold and treat casualties. Casualties had to endure longer ambulance rides to rear area hospitals which caused the fatality rate to climb until General Patton's Third Army counterattacked and stabilized the front. As the front stabilized, the medical units were able to set up semi-permanent facilities to begin receiving casualties. The final toll of American casualties for the Battle of the Bulge was 23,986 killed in action, of that total, 3400 died from wounds after reaching medical facilities and 65,044 were wounded. Another 70,000 casualties were admitted to the field hospitals for hyperthermia, frostbite and other cold related illnesses.⁹⁸

This battle produced the largest number of American casualties since the Civil War battle of Gettysburg. Prime Minister Churchill stated in his address to the House of Commons on July 18, 1945: "This is undoubtedly the greatest American battle of war and will, I believe, regarded as an ever-famous American victory."⁹⁹

The final Allied drive into Germany began on January 15, 1945, with the German defeat in the Ardennes. Operation Veritable began on February 8, 1945, which was the final drive to the Rhine River. Hitler had ordered the German forces to fight to the last round and the last man.¹⁰⁰ The Allies met stiff resistance in some of the fortified villages but February 21, 1945, Operation Veritable had been declared a success as the Allies had reached the Rhine River. The Allies found that almost all of the bridges that could support heavy traffic had been demolished leaving the Allies stranded on the West bank of the Rhine River. But on March 7, 1945, the U.S. First Army captured the bridge at Remagen across the Rhine River which opened the Allied floodgates to drive to the Elbe River. On April 28th, 1945, United States and Soviet units met for

⁹⁸ Whiting, *The Ghost Front*, 165.

⁹⁹ Winston S. Churchill, *The Second World War*, vol. 2 (New York, NY: Houghton Mifflin, 1953), 497.

¹⁰⁰ Wright, *The World at Arms*, 414.

the first time on Germany's Elbe River. The 45th Field Hospital was the most forward hospital unit at that time. When the war ended on May 7, 1945, the 45th Field Hospital had picked up stakes and moved again to finish the war in Pilsen, Czechoslovakia. Using the 45th Field Hospital as an example of how flexible and well trained the United States Army medical units were serving in the European Theater of Operations. The 45th Field Hospital served in the frontline for 331 days since landing at Utah Beach on June 10, 1944, and had traveled over six hundred miles across war-torn Europe and had suffered forty-nine casualties, three of them from combat. The 45th Field Hospital had treated 4950 casualties for a loss of only 223 combat soldiers which is a 96% survival rate. That survival rate is outstanding for the terrible conditions that field hospitals served. The final drive to the Rhine and into the interior of Nazi Germany was punctuated by constant movement of the field hospitals to keep pace with the rapid advance of the American armies.¹⁰¹

During World War II the United States in the Mediterranean and the European Theaters of Operations would suffer a combined total of 152,304 killed in action, 492,475 wounded of which 20,257 died of their wounds after reaching a medical facility. This ratio gave the United States combat soldier an overall 96% survival rate if wounded.¹⁰² By comparison, the British Army, which had the same medical technology but did not use nurses in forward line units had a 75-80% chance of survival if wounded and able to reach a British medical facility.¹⁰³

¹⁰¹ Wright, *The World at Arms*, 415.

¹⁰² Office of the Adjutant General, *Battle Casualties and Nonbattle Deaths in WWII*, 62-63.

¹⁰³ L.F. Ellis, *Victory in the West : The Battle of Normandy* (East Sussex, UK: Naval and Military Press Ltd.,1962), 303.

CHAPTER 5. CONCLUSION

During World War II , Army nurses traveled to every theater of the war to help staff army hospitals, dispensaries, hospital trains and ships, and medical air evacuation squadrons. The United States Army Nurses Corps sustained the heaviest casualty rate of any women's military service during the Second World War. Two hundred and one Army nurses died in World War II, sixteen of them from enemy action. Another 1,600 were decorated for meritorious service. Their performance opened avenues for future nurses in nurse anesthetists, practitioners, midwives, and primary care providers. The Army nurses of World War II provided the best care under the worst conditions to save lives. The nurses of the United States Army Nurses Corps proved instrumental in reducing the fatality rate of combat soldiers in the Mediterranean and European Theater of Operations. During the Second World War the Army Nurses Corps would venture into several groundbreaking roles such as anesthesiology and flight nursing. They would help establish the U.S. Army's modern Mobile Army Surgical Hospitals or MASH units that would play vital roles in saving lives in the Korean and Vietnam Wars.

The Army Nurses Corps still have vital role today in caring for and treating United States Army soldiers stationed in various locations around the world.

BIBLIOGRAPHY

- Ambrose, Stephen. *Citizen Soldiers: The U.S. Army from the Normandy Beaches to the Bulge to the Surrender of Germany June 7, 1944 to May 7, 1945*. New York, NY: Simon & Schuster, 1997.
- “Army War Show Aids Recruitment.” *American Journal of Nursing* 42, no. 8 (Summer 42): 957, accessed January 12, 2021, <http://www.jstor.org/stable/3414906>.
- Aynes, Edith A. *From Nightingale to Eagle*. Englewood Cliffs, NJ: Prentice-Hall, 1973.
- Beevor, Anthony. *D-Day: The Battle for Normandy*. New York, NY: Penguin Books, 2009.
- Blumenson, Martin. *Sicily: Whose Victory?* New York, NY: Ballantine Books, 1969.
- Buchner, Alex. *The German Army Medical Corps in World War II*. Atglen, PA: Schiffer Publishing Ltd., 1999.
- Carnegie, Mary Elizabeth. *The Path We Tread: Blacks in Nursing, 1854-1984*. Philadelphia, PA: J.B. Lippincott, 1986.
- Cerasale, Edith. *The Story of Air Evacuation, 1942-1989*. Dallas, TX: Taylor Publishing Company, 1989.
- Churchill, Winston S. *The Second World War Vol.6*. New York, NY: Houghton Mifflin, 1953.
- Clarke, Jeffery J. and Robert Rose Smith. *The European Theater of Operations: Riviera to the Rhine*. Washington, D.C: U.S. Army Center of Military History, 1993.
- Eisenhower, John S.D., *The Bitter Woods: The Battle of the Bulge*. Boston, MA: Da Capo Press, 1995.
- Ellis, L.F., *Victory in the West: The Battle of Normandy*. East Sussex, UK: Naval and Military Press Ltd., 1962.
- Fraser, David. *And We Shall Shock Them: The British Army in the Second World War*. London, UK: Cassell Military Publishers, 1999.
- Futrell, Robert F. *Development of Aeromedical Evacuation in the USAF: 1909-1960*. Maxwell, AFB. AL: USAF Historical Division, Research Studies Institute, Air University, 1960.
- Gaskins, Susanne Teepe. “G.I. Nurses at War: Gender and Professionalization in the Army Nurse Corps during World War II.” PhD diss., University of California-Riverside, 1994.

- Heaton, Leonard D. *Medical Supply in World War II*. Washington, D.C.: Office of the Surgeon General, Department of the Army, 1968.
- Jackson, Kathi. *They Called Them Angels: American Military Nurses of World War II*. Westport, CT: Praeger Publishers, 2000.
- “Jefferson Nurses Answer Call to Arms in World War II.” pp.46. (2009). A Commitment to Excellence. (TJU Nursing School History)(1982). Paper 8.
<https://jdc.jefferson.edu/shearer/1>.
- Links, Mae Mills, and Hubert A. Coleman. *Medical Support of the Army Air Forces in World War II*. Washington, D.C.: Office of the Surgeon General, USAF, 1955.
- Macdonald, Charles B., *The Battle of Hurtgen Forest*. Philadelphia, PA: University of Pennsylvania Press, 2002.
- Matusow, Rosalind. “Call to Arms.” *American Journal of Nursing* 42, # 8 (Summer 42): 942-944. Accessed January 12, 2021. <https://www.jstor.org/stable/3416094>.
- Mason, David. *Salerno: Foothold in Europe*. New York, NY: Ballantine Books, 1972.
- McEuen, Melissa A. “Women, Gender, and World War II.” *Oxford Research Encyclopedias, American History* (2016). Accessed 25 June 2021.
<https://doi.org/10.1093/acrefore/9780199329175.013.55>.
- Monahan, Evelyn M. and Rosemary Neidel-Greenlee. *And If I Perish: Frontline U.S. Army Nurses in World War II*. New York, NY: Alfred A. Knopf, 2003.
- Moolman, Valerie. *Women Aloft*. Chicago, IL: Time-Life Books, 1981.
- Moore, Brenda L. *Serving Our Country: Japanese Women in the Military during World War II*. New Brunswick, NJ: Rutgers University Press, 2003.
- Office of the Adjutant General. *Battle Casualties and Non-Battle Deaths in World War II: Final Report 7 Dec. 1941- 31 Dec. 1946*. Washington, D.C.: Department of the Army, 1962.
- Price, Alfred. *The Luftwaffe*. New York, NY: Ballantine Books, 1973.
- Roberts, Matthew, and S. Jagdish. “A History of Intravenous Anesthesia in War (1656-1988),” *Journal of Anesthesia History*, Volume 2, Issue 1, (2016): 13-21. Accessed Feb. 1, 2021,
<https://pubmed.ncbi.nlm.nih.gov/26898141/>.
- Rutherford, Ward. *Kasserine Pass: Baptism of Fire*. New York, NY: Ballantine Books, 1970.
- Santana, Maria Cristina. “From Empowerment to Domesticity: The Case of Rosie the Riveter and the WWII Campaign.” *Frontiers in Sociology* 1 (Dec 2016): 1-8. Accessed 25 June 2021.
<https://doi.org/10.3389/fsoc.2016.00016>.

- Sarnecky, Mary T. *A History of the United States Army Nurses Corps*. Philadelphia, PA: University of Pennsylvania Press, 1999.
- Schaefer, Agnes Gereben, et.al. *Implications of Integrating Women into the Marine Corps Infantry*. Santa Monica, CA: Rand Corporation, 2015.
- “The Bolton Bill.” *American Journal of Nursing*, 42, # 7 (July 1942): 678. Accessed December 10, 2020, <http://www.jstor.org/stable/3456178>.
- Tomblin, Barbara Brooks. *G.I. Nightingales: The Army Nurses Corps in World War II*. Lexington, KY: University of Kentucky Press, 1996.
- United States, Adjutant General’s Office. *Army Battle Casualties and Nonbattle Deaths in World War II. Final Report, 7 December 1941- 31 December 1946*. Washington, D.C.: Department of the Army, 1953.
- Welch, Bob. *American Nightingale: The Story of Frances Slanger, Forgotten Heroine of Normandy*. New York, NY: Atria Books, 2004.
- Whiting, Charles. *First Blood: Battle of Kasserine Pass, 1943*. Kent, UK: Bookzat Publishing, 2014.
- Whiting, Charles. *Patton*. New York, NY: Ballantine Books, 1970.
- Whiting, Charles. *The Ghost Front: The Ardennes Before the Battle of the Bulge*. Cambridge, MA: Perseus Books Group, 2002.
- Wiltse, Charles M. *The Medical Department: Medical Service in the Mediterranean and Minor Theaters*. Washington, D.C.: Department of the Army, 1965.
- Wright, Michael. *The World at Arms: The Reader’s Digest Illustrated History of World War II*. Pleasantville, NY: Reader’s Digest Association, 1989.
- Ziobro, Melissa. “Skirted Soldiers: The Women's Army Corps and Gender Integration of the U.S. Army during World War II.” *On Point* 17 (Spring 2012): 36-43

APPENDIX: Battle casualties/month of occurrence

BATTLE CASUALTIES

Battle casualties in Air Corps and all other branches, by month, type, and disposition: 7 December 1941 - 31 December 1946 a/ - continued

Theater, branch, and year and month of occurrence	Total battle casualties	Total deaths among battle casualties <u>b/</u>	Killed in action	Wounded and injured in action				
				Total	Died of wounds and injuries	Evacuated to U.S.		Returned to duty
						Died of wounds and injuries	Returned to duty, discharged etc.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mediterranean Theater, all branches - officers and enlisted	175,107	40,455	35,313	111,125	3,993	0	26,279	80,853
1941 December	5	1	1	4	0	0	1	3
<u>1942</u>	<u>2,994</u>	<u>1,011</u>	<u>878</u>	<u>1,563</u>	<u>72</u>	<u>0</u>	<u>399</u>	<u>1,092</u>
January	27	0	0	22	0	0	5	17
February	34	1	1	20	0	0	6	14
March	8	2	1	1	0	0	0	1
April	0	0	0	0	0	0	0	0
May	19	0	1	1	0	0	0	1
June	13	3	2	2	0	0	0	2
July	3	2	1	1	0	0	1	0
August	15	9	7	4	0	0	1	3
September	11	4	4	4	0	0	2	2
October	11	3	1	6	0	0	3	3
November	1,749	674	621	1,017	47	0	290	680
December	1,104	309	240	485	25	0	369	369
<u>1943</u>	<u>45,723</u>	<u>11,016</u>	<u>9,493</u>	<u>28,311</u>	<u>1,201</u>	<u>0</u>	<u>6,445</u>	<u>20,695</u>
January	986	252	211	572	24	0	110	438
February	4,800	543	431	1,014	47	0	251	716
March	2,875	706	599	2,599	85	0	736	1,778
April	4,963	1,021	888	3,405	91	0	838	2,476
May	1,666	400	336	1,227	42	0	323	862
June	223	71	56	121	9	0	25	87
July	5,281	1,457	1,284	3,272	103	0	722	2,447
August	3,552	880	776	2,418	88	0	536	1,794
September	4,813	981	828	2,640	121	0	594	1,925
October	4,026	1,010	865	2,823	133	0	651	2,039
November	6,847	2,474	2,447	4,444	321	0	879	3,244
December	5,070	1,221	1,072	3,776	137	0	750	2,889
<u>1944</u>	<u>108,617</u>	<u>24,223</u>	<u>21,191</u>	<u>70,226</u>	<u>2,372</u>	<u>0</u>	<u>16,081</u>	<u>51,773</u>
January	9,775	2,495	2,111	5,919	261	0	1,248	4,440
February	12,229	3,178	2,683	7,279	408	0	1,525	5,346
March	5,150	1,489	1,266	3,381	181	0	664	2,536
April	4,203	1,628	1,453	2,033	119	0	446	1,468
May	16,402	3,759	3,292	11,744	366	0	2,530	8,848
June	9,241	2,186	1,900	6,174	260	0	1,486	4,428
July	9,440	2,350	2,122	5,810	203	0	1,241	4,366
August	6,701	1,834	1,765	4,377	56	0	984	3,337
September	12,689	2,701	1,534	9,500	149	0	2,197	7,154
October	16,070	2,759	2,432	10,835	253	0	2,942	7,634
November	3,480	947	839	1,825	66	0	454	1,305
December	3,267	897	794	1,349	50	0	358	941
<u>1945</u>	<u>17,555</u>	<u>4,201</u>	<u>3,750</u>	<u>10,956</u>	<u>347</u>	<u>0</u>	<u>3,364</u>	<u>7,245</u>
January	1,448	401	351	669	24	0	163	482
February	4,127	1,081	902	2,355	61	0	607	1,687
March	3,072	757	649	1,475	69	0	433	973
April	8,646	1,905	1,713	6,311	182	0	2,117	4,012
May	172	50	40	124	10	0	37	77
June	14	2	2	11	0	0	3	8
July	5	1	0	5	1	0	1	3
August	3	0	0	2	0	0	1	1
September	3	1	1	1	0	0	1	1
October	1	0	0	1	0	0	0	0
November	4	3	2	1	0	0	0	1
December	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0
Date unknown	213	3	0	65	1	0	19	45

See footnotes on page 45.

Continued on next page

¹⁰⁴ United States, Adjutant General's Office, *Army Battle Casualties and Nonbattle Deaths in World War II. Final Report, 7 December 1941- 31 December 1946* (Washington, D.C.: Department of the Army, 1953), 34.

MONTH OF OCCURRENCE

Battle casualties in Air Corps and all other branches, by month, type,
and disposition: 7 December 1941 - 31 December 1946 a/ - continued

Total	Captured and interned				Missing in action				Theater, branch, and year and month of occurrence
	Killed in action	Wounds and in- juries	Other causes (non- battle)	Returned to military control	Total	Died		Returned to duty	
						De- clared dead	Other causes (non- battle)		
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
20,182	64	63	44	20,011	8,487	978	0	7,509	Mediterranean Theater, all branches - officers and enlisted
0	0	0	0	0	0	0	0	0	1941 December
391	4	7	3	377	162	47	0	115	1942
4	0	0	0	4	1	0	0	1	January
11	0	0	0	10	2	1	0	1	February
5	0	0	0	5	1	1	0	0	March
0	0	0	0	0	0	0	0	0	April
10	0	0	0	10	8	2	0	6	May
8	0	1	0	7	1	0	0	1	June
0	0	0	0	0	1	0	0	0	July
2	0	0	0	2	2	2	0	0	August
3	0	0	0	3	0	0	0	0	September
4	0	0	0	2	2	2	0	0	October
34	0	0	1	33	77	5	0	72	November
312	4	5	2	301	67	33	0	34	December
6,671	28	14	25	6,604	1,248	255	0	993	1943
176	1	2	0	173	27	14	0	13	January
3,166	11	4	13	3,138	189	37	0	152	February
606	2	1	2	601	72	17	0	55	March
165	0	2	2	161	125	38	0	87	April
51	1	0	0	50	52	21	0	31	May
39	0	0	0	39	7	6	0	1	June
478	3	0	3	472	247	64	0	183	July
233	1	1	0	231	125	14	0	111	August
1,151	7	4	4	1,138	194	19	0	175	September
294	1	1	0	292	84	10	0	74	October
187	1	1	0	185	69	4	0	65	November
165	0	0	1	164	57	11	0	46	December
11,239	27	39	15	11,158	5,961	579	0	5,382	1944
1,383	8	4	4	1,370	362	110	0	252	January
1,973	3	4	3	1,963	294	77	0	217	February
363	0	3	1	359	140	38	0	102	March
552	2	6	0	544	165	48	0	117	April
913	2	4	0	907	453	95	0	358	May
806	3	3	1	800	361	20	0	341	June
1,000	4	4	4	988	478	13	0	465	July
906	1	3	0	902	653	9	0	644	August
1,036	0	5	1	1,030	619	12	0	607	September
1,440	1	2	1	1,436	1,363	70	0	1,293	October
357	0	3	0	354	449	39	0	410	November
500	4	0	1	495	624	48	0	576	December
1,738	5	26	1	1,730	1,111	96	0	1,015	1945
132	2	0	0	130	236	24	0	212	January
538	1	1	1	535	302	25	0	277	February
601	1	1	0	599	347	37	0	310	March
403	1	0	0	402	219	9	0	210	April
0	0	0	0	0	3	5	0	5	May
0	0	0	0	0	1	0	0	1	June
0	0	0	0	0	0	0	0	0	July
0	0	0	0	0	0	0	0	0	August
0	0	0	0	0	0	0	0	0	September
0	0	0	0	0	1	1	0	0	October
0	0	0	0	0	0	0	0	0	November
0	0	0	0	0	0	0	0	0	December
143	0	1	0	142	5	1	0	4	1946 Date unknown

See footnotes on page 45.

Continued on next page

BATTLE CASUALTIES

Battle casualties in Air Corps and all other branches, by month, type,
and disposition: 7 December 1941 - 31 December 1946 a/ - continued

Theater, branch, year and month of occurrence	Total battle cas- ualties	Total deaths among battle cas- ualties b/	Killed in action	Wounded and injured in action				
				Total	Died of wounds and injuries	Evacuated to U.S.		Returned to duty
						Died of wounds and injuries	Returned to duty, discharged etc.-	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
European Theater, all branches - officers and enlisted	586,628	135,576	116,991	381,350	16,264	0	125,417	239,669
1941 December	6	1	1	3	0	0	0	3
<u>1942</u>	<u>826</u>	<u>341</u>	<u>301</u>	<u>287</u>	<u>19</u>	<u>0</u>	<u>94</u>	<u>214</u>
January	15	4	3	6	0	0	0	4
February	16	4	4	7	0	0	0	5
March	0	0	0	0	0	0	0	0
April	6	1	1	2	0	0	0	1
May	19	7	2	1	1	0	0	0
June	9	4	3	5	1	0	0	2
July	13	8	8	2	0	0	0	2
August	25	13	13	11	0	0	0	8
September	54	22	20	15	2	0	0	10
October	86	39	34	26	4	0	0	18
November	288	103	85	152	6	0	0	120
December	307	142	133	60	9	0	0	44
<u>1943</u>	<u>13,336</u>	<u>5,435</u>	<u>5,118</u>	<u>1,836</u>	<u>113</u>	<u>0</u>	<u>320</u>	<u>1,403</u>
January	473	236	229	129	28	0	0	98
February	1,108	305	288	129	12	0	0	32
March	373	183	172	93	4	0	0	81
April	379	137	110	58	15	0	0	34
May	913	429	398	173	21	0	0	130
June	940	429	416	128	7	0	0	106
July	1,379	588	545	202	13	0	0	166
August	1,424	521	482	145	6	0	0	115
September	1,045	350	318	133	9	0	0	94
October	2,072	734	695	177	10	0	0	130
November	1,307	677	654	198	3	0	0	143
December	1,923	846	831	275	9	0	0	207
<u>1944</u>	<u>367,186</u>	<u>87,535</u>	<u>75,109</u>	<u>230,484</u>	<u>10,744</u>	<u>0</u>	<u>69,166</u>	<u>150,574</u>
January	2,806	981	947	347	17	0	0	92
February	3,585	1,264	1,198	460	21	0	0	100
March	3,810	1,262	1,224	386	24	0	0	86
April	5,315	2,000	1,958	620	18	0	0	118
May	4,351	1,492	1,397	590	31	0	0	132
June	39,367	10,871	9,379	29,528	1,318	0	0	5,881
July	51,424	12,849	10,891	36,647	1,876	0	0	9,720
August	42,535	10,756	9,111	29,291	1,558	0	0	7,914
September	42,183	10,495	8,830	27,429	1,495	0	0	6,369
October	31,617	7,218	6,119	21,419	983	0	0	4,568
November	62,437	13,034	11,260	45,526	1,569	0	0	16,193
December	77,726	15,333	12,795	42,241	1,834	0	0	13,993
<u>1945</u>	<u>204,321</u>	<u>42,260</u>	<u>36,459</u>	<u>148,696</u>	<u>5,327</u>	<u>0</u>	<u>55,866</u>	<u>87,443</u>
January	69,119	12,190	10,391	49,415	1,966	0	0	16,105
February	39,414	8,266	7,202	29,638	1,010	0	0	11,441
March	53,209	12,061	10,483	38,333	1,512	0	0	15,226
April	41,058	9,273	7,994	29,695	1,224	0	0	12,458
May	2,028	428	357	1,513	67	0	0	601
June	67	20	13	48	6	0	0	14
July	27	5	4	19	1	0	0	8
August	10	5	4	5	0	0	0	3
September	9	4	4	3	0	0	0	2
October	10	4	4	2	0	0	0	3
November	1	2	2	0	0	0	0	1
December	23	2	1	22	1	0	0	4
1946	5	3	2	3	1	0	0	2
Date unknown	308	1	1	41	0	0	0	9

See footnotes on page 45.

Continued on next page

MONTH OF OCCURRENCE

Battle casualties in Air Corps and all other branches, by month, type,
and disposition: 7 December 1941 - 31 December 1946 *2/* - continued

Total	Captured and interned				Missing in action				Theater, branch, and year and month of occurrence	
	Killed in action	Died			Returned to military control	Total	Died			Returned to duty
		Wounds and in- juries	Other causes (non- battle)	Returned to military control			De- clared dead	Other causes (non- battle)		
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
73,759	224	194	532	72,809	14,528	1,361	10	13,157	European Theater, all branches - officers and enlisted	
1	0	0	0	1	1	0	0	1	1941 December	
207	3	1	4	199	41	13	0	26	1942	
6	0	0	0	2	0	0	0	0	January	
4	0	0	0	4	1	0	0	1	February	
0	0	0	0	0	0	0	0	0	March	
3	0	0	0	3	0	0	0	0	April	
10	1	0	0	6	0	0	0	6	May	
1	0	0	0	1	0	0	0	0	June	
3	0	0	0	3	0	0	0	0	July	
4	0	0	0	4	0	0	0	0	August	
17	0	0	0	17	2	0	0	0	September	
22	0	0	1	21	4	0	0	4	October	
31	0	1	0	30	20	11	0	9	November	
106	2	0	0	104	8	2	0	6	December	
5,819	9	12	18	5,780	563	165	0	398	1943	
109	1	0	0	107	10	1	0	9	January	
676	0	0	4	672	35	21	0	14	February	
100	0	0	1	99	8	6	0	2	March	
198	1	0	1	196	13	10	0	3	April	
307	0	2	2	303	35	6	0	29	May	
380	2	0	1	377	16	3	0	13	June	
549	0	2	0	547	83	28	0	55	July	
717	0	2	0	715	80	31	0	49	August	
489	1	2	2	484	105	18	0	87	September	
1,123	2	0	5	1,116	77	22	0	55	October	
420	1	2	2	415	35	15	0	20	November	
751	1	1	0	749	66	4	0	62	December	
51,377	180	143	417	50,637	10,186	937	5	9,244	1944	
1,394	2	1	1	1,390	118	13	0	105	January	
1,777	2	7	3	1,765	150	33	0	117	February	
2,073	4	2	4	2,063	127	4	0	123	March	
2,954	2	6	1	2,945	183	15	0	168	April	
2,160	2	6	5	2,147	204	51	0	153	May	
3,423	20	15	4	3,384	1,037	135	0	902	June	
3,068	15	5	7	3,041	818	55	0	763	July	
2,803	5	7	9	2,782	1,330	66	0	1,264	August	
4,780	13	13	11	4,743	1,144	133	0	1,011	September	
3,228	4	14	7	3,203	851	91	0	760	October	
4,283	16	12	20	4,235	1,368	137	0	1,231	November	
19,834	95	55	345	19,339	2,856	204	5	2,647	December	
16,092	32	38	93	15,929	3,734	246	5	3,483	1945	
8,344	19	27	83	8,215	969	99	0	865	January	
1,945	6	7	4	1,928	629	37	0	592	February	
3,284	3	3	4	3,274	1,109	56	0	1,053	March	
2,429	2	1	1	2,425	942	51	0	891	April	
80	2	0	1	77	78	1	0	77	May	
3	0	0	0	3	3	1	0	2	June	
3	0	0	0	3	1	0	0	1	July	
0	0	0	0	0	1	1	0	0	August	
1	0	0	0	1	1	0	0	0	September	
1	0	0	0	1	1	0	0	0	October	
2	0	0	0	2	1	0	0	1	November	
0	0	0	0	0	0	0	0	0	December	
0	0	0	0	0	0	0	0	0	1946	
263	0	0	0	263	3	0	0	3	Date unknown	

See footnotes on page 45.

Continued on next page

VITA

JOSHUA B.GROOMES

Education: M.A. History, East Tennessee State University, Johnson City,
Tennessee, 2021

B.S. History, East Tennessee State University, Johnson City,
Tennessee, 2019

Experience: A.S. Computer Information Technology, Northeast State Technical
Community College, Blountville, Tn., 2005

Graduate Assistant, East Tennessee State University, College of
Arts and Sciences, 2019-2021

Honors: Phi Alpha Theta membership conferred December 20, 2020.